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Which donors, which funds?

The choice of multilateral funds by bilateral donors at the World Bank

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Abstract

The rapid growth of trust funds at multilateral development organizations has been widely neglected in the academic literature so far. This paper examines the choice by sovereign donors among various trust fund options. It contends that the choice among the different trust funds involves a fundamental trade-off: larger funds provide donors with "burden-sharing" benefits, but each donor can better assert its individual preferences in a fund with fewer other donors. The theoretical considerations yield testable hypotheses on a range of factors affecting this fundamental trade-off, most notably the area of intervention of the trust fund and competing domestic interests of donor countries. A large-N analysis of participation decisions of OECD/DAC donors in trust funds over the past decade mostly corroborates these hypotheses. In particular, ex-ante preference alignment among donors as well as indicators for global activities and fragile states aid are robust determinants of participation in (large) multi-donor funds. In contrast, a donor tends to prefer a single-donor fund in areas in which its national interests dominate.

Key words: Trust funds, political economy, multilateral agencies, World Bank

JEL codes: F35, F55, F59, O19

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For the online appendix and replication material for this article, refer to the International Organization replication website, xxx.

1 Introduction

When a state wants to cooperate with other states, it faces a choice among a variety of international organizations through which it can do so. In deciding to join an international organization, an important variable is the number of member countries. For example, everything else equal, a higher number of member states exacerbates the collective-action problem among states.[1] In the field of development assistance, a higher number of donors implies that burden-sharing benefits for each donor are larger but the costs for each donor in terms of its loss of control are also higher.

While this mechanism may plausibly govern the institutional choices by individual donor countries, it is extremely hard to test. In this paper, we are able to do so by exploiting a relatively new development in the multilateral development system. Over the past decade, donor governments have increasingly channeled their foreign aid through "trust funds," earmarked for particular activities. These trust funds are ad-hoc international institutions that support specific development issues and that rely on the implementing capacities of the international development organization that hosts them. A prominent example is the Afghanistan Reconstruction Trust Fund. It is hosted by the World Bank, but the World Bank must keep the trust fund contributions apart from its own assets and cannot use them for other purposes related to its mandate. The World Bank is the most important trustee organization, followed by the United Nations.[2] Since the turn of the millennium, trust funds at international development organizations have grown massively. With a volume of 19 billion USD in 2012, they represent about 20% of bilateral aid and almost 60% of

[1] Buchanan 1965; Olson 1965; Hardin 1982.

[2] A trustee does not need to implement the contributions received through trust fund arrangements but may only provide fiduciary services. In this broad sense, the World Bank, which manages the accounts of its own funds and most legally independent global funds, manages the largest portfolio of trust funds. When considering only trust funds for which the host organization also implements the programs, the United Nations entities' portfolios collectively are larger than the World Bank's (see Section 2).

multilateral aid.[3] At the World Bank, annual trust fund contributions quadrupled in less than a decade from their levels in the late 1990s.[4] Currently, the World Bank receives annual contributions of about USD 4 billion that support its own programs. In addition, the World Bank further holds about USD 10 billion in trust for which it only provides fiduciary services.[5] The sheer number of different funds is even more striking: The World Bank Group manages over 1,000 funds. Most importantly, these trust funds differ in their size in terms of the number of donors, ranging from single-donor trust funds to multi-donor trust funds that in some cases comprise almost the entire membership of the host organization. The emergent micro-cosmos of trust funds therefore covers a whole range of new institutional options for donor activities, ranging from perfect substitutes for traditional bilateral aid to perfect substitutes for multilateral aid, and all options in between (in terms of the number of donors).

In this paper, we study the determinants of individual donor choices among different-sized trust funds. Using a simple theoretical model, we posit that a given donor faces a trade-off between the greater burden-sharing benefits of funds with more donors and the greater ability to assert its own preferences in funds with fewer donors. Hence, the number of donors within a fund represents a key variable in our model: synergies from cooperation with other donors increase when there are more of them, but any given donor must compromise more on the specific objectives of the fund, e.g. with respect to regions, countries, sectors, or themes. Other things equal, in an issue area with low alignment of interests, cooperation with many other donors will be less attractive than a fund with fewer donors. Conversely, a fund with many other donors will be more attractive when "burden sharing" is an important motive, e.g. in high-risk areas such as assistance to fragile or post-conflict countries.

[3] Reinsberg, Michaelowa, and Eichenauer 2015.
[4] IEG 2011.
[5] World Bank 2013a.

Using a dataset of trust fund participation decisions of donor countries at the World Bank from 2002 to 2013, we conduct multivariate analysis to test some observable implications of our theory. Using Wald tests in seemingly unrelated regression estimations to compare the effect of fund and donor characteristics on the participation decisions in single-donor, multi-donor, and large multi-donor trust funds, we find consistent support for our main hypotheses. We find that ex-ante sector alignment among all donors, as well as indicators for global activities and fragile states assistance, increase a donor's willingness to opt for (large) multi-donor trust funds. In contrast, a donor prefers single-donor trust funds when and where its national interests tend to predominate. This evidence also puts into perspective the common wisdom that trust funds first and foremost are a means to enhance donor coordination and to reduce donor fragmentation.[6] In contrast, our paper suggests that donors can reap the benefits of aid harmonization through trust funds only when their preferences are relatively aligned.

Our argument is not entirely novel but combines key elements of existing approaches to international cooperation. Some aid allocation studies argue that the choice between bilateral aid and multilateral aid hinges on how a given donor trades off potential burden-sharing benefits versus its desire for control.[7] Our paper goes beyond the discrete choice between these two channels of aid allocation and studies the entire range of intermediate choices available to a donor through participation in trust funds. Another novel aspect of our study is its analysis of the implications for burden-sharing benefits and loss of control as the number of donor partners in an international organization increases. In addition, recent research has examined allocations of individual donors among existing international development organizations based on the similarities in the allocations of these organizations with the

[6] Guder 2009; Barakat, Rzeszut, and Martin 2012; Reinsberg, Michaelowa, and Eichenauer 2015.

[7] Milner and Tingley 2013.

bilateral portfolios of the donors and the efficiency differences of the organizations.[8] We extend this approach by considering the number of donors in any given organization. We also do not consider a given set of organizations but allow for the possibility that a donor creates an ad-hoc international institution (specifically, in the form of a trust fund) on its own or in partnership with other donors. This is a new feature of the flexible instrument of trust funds that has not been considered in the previous literature. Finally, as part of this research we conducted more than 80 staff interviews at the World Bank, which inform our theoretical discussion and provide qualitative evidence to complement our data analysis.

Our theory has implications for institutional design beyond trust funds. On the one hand, we expect a similar trade-off as the one we develop here to govern the choice of a given country to join a specific set of international organizations. On the other hand, we emphasize the novelty of trust funds as a design solution for global issues that warrant flexible forms of cooperation among states. In contrast to full-fledged international development organizations, trust funds are ad-hoc institutions that are easy to establish but that are also readily terminated when deemed appropriate by the donors. While international development organizations are typically seen as the most efficient solution to resolve burgeoning development challenges, our evidence suggests that alternative institutional solutions that convene a coalition of states may be more efficient, depending on the preference constellation of all states. In some cases, trust funds may even be the only feasible solution to address new development challenges, notably when there is stalemate in the formal governing bodies of the established international organizations. Accordingly, donors emphasize that they use trust funds to "fill gaps in the multilateral system," e.g., assisting fragile states, supplying global public goods, and tackling humanitarian emergencies.[9]

[8] Schneider and Tobin 2016.
[9] IEG 2011: 6.

We proceed as follows. In Section 2, after clarifying relevant terms, we first present the historical evolution of trust funds using the example of the World Bank. We also present a descriptive analysis of donor participation decisions in the various types of trust funds at the Bank. In Section 3, we review the related literature that will inform our subsequent theoretical argument on the determinants of trust fund choice. Section 4 presents our argument and derives concrete testable hypotheses related to donor choices of different types of trust funds. Section 5 reports findings from the econometric analysis. Section 6 provides a summary and conclusions.

2 Historical developments of trust funds

Trust funds represent the main instrument for bilateral donors to channel multi-bi aid to international development organizations. Multi-bi aid refers to earmarked contributions by donor countries to international development organizations to support specific development purposes, notably specific themes, sectors, or countries.[10] From a recipient-country perspective, trust funds provide grant resources and thus are most comparable to the established grant-making facilities of multilateral agencies.[11] In most agencies, trust funds can be established between the donor(s) and the agency without approval of the formal governing bodies.[12] Fund administration is governed by an agreement between the bilateral donor(s) and the agency, which provides trustee services and administers the related programs.[13] The agreement covers not only the substantive program priorities supported by the fund but also determines the conditions of program delivery. Despite much flexibility in such an agreement, international procurement rules also apply to the programs supported

[10] OECD 2011: 28.

[11] Grant-making facilities include all United Nations agencies and the concessional windows of the multilateral development banks. The fact that trust funds provide grant funding does not imply that they are unrelated to loan projects, as exemplified by the relevance of trust funds for technical assistance (e.g., PHRD 2012).

[12] World Bank 2012a: 27.

[13] Bantekas 2009; Droesse 2011; McKeehan 2012.

through trust funds. In particular, this usually prevents donors from directly tying their contributions to domestic purchases.[14]

2.1 The rise of trust funds at the World Bank

The World Bank has long-standing experience with trust funds dating to the 1960s.[15] Its first trust fund was established in 1960, when several donors jointly created a trust fund to co-finance the Indus Basin Project in Pakistan. Also in the 1960s, the World Bank agreed to execute technical assistance projects of the United Nations Development Program (UNDP). Until the late 1990s, trust funds grew only very slowly and mostly were a vehicle for the Bank to participate in partnership programs, for example the Consultative Group on International Agricultural Research (CGIAR) in the 1970s. In the mid-1980s, donors also started to use consultant trust funds to support the analytical work of the Bank and to provide technical assistance to recipient countries. An important fund established in 1987 was the Policy and Human Resource Development program (PHRD), which financed project preparation activities.[16]

The early 1990s witnessed the first sizable trust fund that was a collective makeshift for donors confronted with policy stalemate in the formal governing body. When the United States withheld its IDA contribution to pressure for reforms at the World Bank, other donors created an interim trust fund to cover the costs of some World Bank programs.[17]

Since the late 1990s, trust funds were discovered by donors frustrated with their

[14] The only exception to this general rule is a consultant trust fund, in which a donor may use its own staff to perform an analytical task. In 2004 the World Bank announced it would no longer accept consultant trust funds.

[15] Technically speaking, the International Development Association (IDA), created in 1960, was the first trust fund. Given its broad mandate and its nearly universal membership, it is not considered to be a trust fund in the common sense that refers to earmarked funding for special purposes.

[16] World Bank 2005: 1.

[17] USGAO 1995: 20; Thibodeau 1996; Weaver 2008: 54.

own limited possibilities to influence World Bank policies, and by the Bank's sluggishness in addressing emergent issues they deemed important. For example, Japan sought to establish an ideological counterpart to the United States by establishing its own trust fund with the World Bank.[18] In addition, some middle powers such as the Nordic donors were "much more financially forthcoming relative to their economic wealth than the United States" and bypassed the formal budgetary process, providing supplementary trust fund resources in exchange for policy influence.[19] Examples of such influence-seeking trust funds include the Japanese Social Development Fund (JSDF), which complemented Bank-financed operations by small-scale activities with local non-governmental actors,[20] the Bank-Netherlands Partnership Program (BNPP), which supported pilot studies to help the Bank identify "where most development impacts could be expected,"[21] the Governance Partnership Facility (GPF), funded by the United Kingdom, the Netherlands, and Norway (Australia joined later),[22] and trust funds to alleviate post-conflict reconstruction needs, for example in Bosnia and Herzegovina.[23]

In some cases, the Bank has encouraged donors to channel their development assistance through trust funds. A well-documented case of "mission creep" initiated from inside the Bank is climate change. Expecting a honey pot, the Bank expanded into carbon finance, despite reservations in the Board of Executive Directors and by the United States. In 1996, it launched a pilot fund, backed by Bank president James Wolfensohn, and institutionalized its new role by establishing the Carbon Finance Group in the department for sustainable development in 2003. Subsequently, trust funds related to climate change have proliferated.[24]

[18] Weaver 2007: 500.
[19] Kapur 2002: 63.
[20] World Bank 2012b: 32.
[21] BNPP 2013: 2.
[22] World Bank 2012b: 133.
[23] Mallaby 2004.
[24] Michaelowa and Michaelowa 2011: 262-263.

While formally rejected by many member states, the climate activities of the World Bank were supported by some OECD/DAC donors.[25] Similarly, OECD/DAC donors pushing a "good governance" agenda over the opposition of many recipient countries also turned to trust funds. The governance agenda clashed not only with the principle of enhancing recipient-country ownership, but also to some extent with the Bank's Articles of Agreement, which prohibit it from interfering in countries' political affairs.[26] By operating via trust funds, OECD/DAC donors could avoid lengthy discussions and costly concessions in the Board of Governors to build consensus on the necessary legal adaptations to make the Bank work on political governance issues.

In the 2000s, the World Bank further expanded its role in trust funds. In tandem with its explosion in IBRD/IDA trust funds, the Bank also positioned itself as a trustworthy partner for "multi-actor funds"[27] – legally independent multilateral institutions that mobilize donor resources and pass them on to multilateral agencies for implementation.[28] In these partnerships, supported by "financial intermediary funds" (FIFs), the Bank only provides limited fiduciary services. In essence, while donors did not perceive the World Bank and many other United Nations entities as "fit for purpose" to address global challenges,[29] for example HIV/AIDS,[30] they charged the Bank with the financial accounting for multi-actor funds. This helped the Bank become involved in global issues and hence build up the relevant expertise to position itself against competition.[31] There are only 20 FIF programs, but these

[25] Opposition against making the World Bank formally work on climate change issues primarily comes from developing countries, which have less influence at the World Bank than in more egalitarian international institutions (Müller and Winkler 2008).

[26] Mallaby 2004: 180; Weaver 2008: 93; Weaver 2008: 116.

[27] Heimans (2004) uses this term, which emphasizes the possibility that donors may not only be governments but also non-government actors. We introduce the term for completeness here (in its original context of funding to FIFs) but refer to multi-donor trust funds from here on.

[28] Reinsberg, Michaelowa, and Eichenauer 2015: 530.

[29] E.g., Held and McGrew 2003; Woods 2005; IEG 2011.

[30] Mallaby 2004: 329.

[31] IEG 2011: 65-69.

programs are sizable and account for almost two-thirds of total trust fund portfolio assets.[32]

The historical evolution of trust funds at the World Bank is reflected in its current portfolio. Mirroring the crucial role of trust funds in assisting post-conflict states, it is no surprise that Afghanistan, West Bank and Gaza, Timor-Leste, and Sudan are among the top 10 recipients in terms of the overall number of trust fund contributions between FY 2002-13 (Figure 1). Post-conflict needs may also play a role in Serbia, Bosnia, and Sierra Leone, which follow suit in the top 25 list.[33]

[Figure 1 here]

Most trust funds are not designed to support specific countries. An analysis of the historical record of trust fund contributions from FY 2002-13 – the longest time span for which systematic information on trust fund contributions is available – shows that less than 30% of all trust funds were earmarked for a specific country at the time of agreement. Conversely, almost 60% of the funds are of global scope, while the remainder supports (inter-) regional activities. However, almost all trust funds support dedicated themes or sectors,[34] reflecting the fact that many trust funds were initiated by individual donors pushing for their most salient sectoral or thematic interests.

Following our description of the historical trends in trust funds at the World Bank, we focus on the participation patterns of individual OECD/DAC donors. OECD/DAC donors provide the bulk of contributions, and account for 90% of all participation decisions. About 300 other donors, including multilateral donors, donor countries, and private foundations, share the remainder.[35]

[32] See World Bank 2014a. In 2012, the average contribution to a financial intermediary fund was USD 12 million; the comparable figure for both single-donor trust funds and multi-donor trust funds with fewer than five donors was USD 3 million (World Bank 2014a and 2014b).

[33] From a Bank perspective, trust funds are a useful tool to engage in these countries because many of them either are not eligible for IBRD/IDA resources or it would be too risky for the Bank to invest its own assets (Interview with Adviser from a Central Unit, July 15, 2013).

[34] World Bank 2014a.

[35] World Bank 2014b.

2.2 Donor participation decisions

In the following, we present some descriptive statistics on donor participation decisions in World Bank trust funds based on contributions data in the trust fund databases.[36] Using linear probability models with country fixed effects (no constant, no controls, and robust standard errors), we obtain an estimate for the propensity of each DAC donor country to participate in a given type of fund along with a confidence interval. First of all, we consider the average participation in any type of trust fund for each donor. Figure 2 shows that the Netherlands and the United Kingdom are by far the most active users of trust funds at the World Bank. Australia, Canada, Denmark, Norway, Sweden, and Switzerland are the other donors with a significantly higher than average propensity to use trust funds. Finland, France, Germany, Ireland, and the United States are just below, but very close to the DAC average. The group of countries with a propensity significantly below the DAC average comprises the southern European member states (Greece, Italy, Portugal, and Spain), other small donors (Austria, Belgium, Iceland, New Zealand) and the two Asian donors (Japan and South Korea).

[Figure 2 here]

In terms of the total number of trust funds to which a donor contributed between FY 2002-13, the United Kingdom (450 contributions), the Netherlands (400 contributions), and Sweden (280 contributions) are the top three donors. In cumulative terms, the largest contributions between FY 2002-13 were made by the United Kingdom (USD 15 billion), the United States (USD 14 billion), and Japan (USD 8 billion). The United Kingdom has also undergone the most dynamic evolution, growing from a mid-sized to the largest trust fund donor in less than a decade.

We also examine the distribution of the number of donors that join together in a trust fund. This distribution tends to follow a power law: almost half of trust funds

[36] World Bank 2014b.

are supported by a single donor, while trust funds with two, three or four donors each occur at a frequency of about 8%, and trust funds with more than 4 donors at a frequency of below 5%. These frequencies further decline for increasing fund sizes. However, there also are some funds in which all DAC donors are members. The empirical distribution of fund sizes suggests a simple categorization of trust funds that forms the backbone of our subsequent analysis. In particular, we distinguish among single-donor trust funds (SDTFs), small multi-donor trust funds (MDTFs) (up to 4 donors), and large MDTFs (5 donors or more). The cut-off between small and large MDTFs is somewhat arbitrary, but corresponds to the discussion in the literature, as exemplified by donor groups such as the "Nordic donors."

Figure 3 differentiates between the propensity of donors to join these three types of funds. Donors with above-average propensity to create SDTFs include the Netherlands, the United Kingdom, Sweden, Canada, Switzerland, Australia, and the United States. For small MDTFs, several donors are significantly above the average, including the United Kingdom, the Netherlands, Norway, Switzerland, Sweden, Denmark, and Australia. Particularly noteworthy is the low participation of the United States in these types of funds, even more so given its above-average use of SDTFs. For large MDTFs, the picture looks similar, with the United Kingdom, the Netherlands, Norway, Sweden, Switzerland, and Canada being significantly above the average donor in their participation rates.

[Figure 3 here]

In general, the donor countries with more SDTFs also participate more frequently in MDTFs. Similarly, most donors with little or no participation in SDTFs are even further below average in their propensity to join MDTFs. Essentially, this implies that they hardly engage in trust funds at all. In contrast, some countries participate in nearly all multi-donor initiatives, which cannot easily be seen from the plotted probability in Figure 3. For example, the United Kingdom participates in almost half of all small MDTFs. There is no strong correlation between choice of trust fund

type and overall donor size. Relatively large donors such as the United Kingdom, the Netherlands, and the United States have the capacity to "go it alone," but smaller donors such as Austria, Ireland, and Switzerland also have a tendency to use SDTFs – perhaps hinting at isolated policy preferences.

The different participation patterns across DAC donors as well as the use of different funds warrant an explanation. In the following, we seek to leverage related literature for developing our theoretical argument to account for these empirical patterns.

3 Related Literature

Few academic studies explicitly address multi-bi aid. Only recently have scholars begun to analyze multi-bi aid more systematically, and some of the work cited below is not yet published. Erin Graham traces the growing bilateralization of the United Nations development system. Her article raises concerns that multi-bi funding undermines universal multilateralism.[37] In another article, Graham illustrates that variation in donor preferences over both the size and the substance of agency activity can explain macro-historical shifts in funding rules from core funding to (unearmarked) voluntary funding and earmarked funding at international organizations since the Second World War.[38] Devi Sridhar and Ngaire Woods examine the specific case of the Global Fund to Fight Aids, Tuberculosis, and Malaria and suggest that donors channel resources through the Global Fund to influence the activities of the World Health Organization, a practice they term "Trojan multilateralism."[39]

A broader analysis of multi-bi aid across all institutions has become possible only recently with a new multi-bi aid dataset.[40] The new data allow tracking the

[37] Graham 2015.
[38] Graham 2016.
[39] Sridhar and Woods 2013.
[40] See Eichenauer and Reinsberg (2016). For the codebook, see Eichenauer and Reinsberg (2014).

evolution of multi-bi aid after the Cold War and inform the debate on its underlying motives and related implications for aid effectiveness.[41] In fact, multi-bi financing may have tangible implications on international development organizations in terms of distorting program priorities, rivalry with core resources, and funding sustainability.[42] From a theoretical perspective, the combination of donor preferences, discretion granted to the multilateral organization, and voting rules influence allocation decisions among bilateral aid, unearmarked voluntary contributions, and earmarked funding.[43] Other work shows that earmarked funding relates to the interplay between capacity constraints and domestic politics in the donor, as evidenced for the European Union institutions.[44] Further ongoing work studies the country allocations of trust funds in comparison to core-funded operations[45] These studies illustrate that trust funds are used for various purposes and that the effectiveness of trust funds hinges upon their funding purposes and underlying motivations. However, none of these studies explicitly address the variety of choices within multi-bi aid, and the key question of how donors decide among these alternatives.

Based primarily on donors' own arguments regarding this new phenomenon, some of the literature is also based on faulty assumptions which can lead to erroneous conclusions.[46] In particular, the neglect of SDTFs tends to perpetuate the conventional wisdom that donors primarily use trust funds as a means to enhance aid coordination. In fact, many studies argue that multi-bi aid allows bilateral donors to pool their resources and thereby achieve key principles of the Paris Declaration,[47] including recipient-country ownership, aid harmonization, and mutual accountability,[48]

[41] Reinsberg, Michaelowa, and Eichenauer 2015; Eichenauer and Reinsberg 2016.
[42] Reinsberg 2016.
[43] Eichenauer and Hug 2015.
[44] Michaelowa, Reinsberg, and Schneider 2016.
[45] Eichenauer and Knack 2016.
[46] See Reinsberg, Michaelowa, and Eichenauer, who review the related literature.
[47] For details on the Paris Declaration and the related Accra Agenda for Action, see http://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm (accessed February 1, 2015).
[48] Barakat 2009; Guder 2009; OECD 2011.

although success is sometimes difficult to achieve.[49]

In contrast, other studies emphasize that multi-bi aid gives an individual donor nearly as much control as bilateral aid, but without requiring the donor to sustain a full-fledged aid bureaucracy, while still benefiting from the expertise and professionalism of multilaterals.[50] This view suggests that multi-bi aid is popular with donors because it combines the "best of two worlds." But this perspective overlooks the variety of choices within multi-bi aid. Our argument is that there is a trade-off in using multi-bi aid, but the flexibility of trust funds allows the donors to select the optimal combination between the two extremes, on a case-by-case basis for specific topics and under the varying political and economic conditions in the donor country itself.

To analyze the choice among different types of trust funds, we draw on three related, more general strands of the literature on international organization and adapt their insights to our research questions.

The first strand concerns the rational design of international institutions that can be used to explain the associated institutional choices from a donor perspective. In general, the rational design literature relates specific institutional design choices of inter-state cooperation to the potential conflicts over the distribution of the gains from cooperation, the existence of an enforcement problem, the number of relevant actors in the field, and issue characteristics such as the distribution of state preferences, uncertainty, transaction costs, and group characteristics.[51] States may also design whole ensembles of institutions, an issue studied by the literature on international regime proliferation.[52]

[49] Barakat, Rzeszut, and Martin 2012. This ambivalence on the potential purpose of trust funds – "bilateralization of multilateral aid" and "multilateralization of bilateral aid" – also features in other policy studies (Mahn 2012; Browne and Weiss 2014).

[50] Carlsson 2007: 63; IEG 2011: 6; OECD 2011: 28; Tortora and Steensen 2014: 15.

[51] Martin 1992; Abbott and Snidal 1998; Abbott and Snidal 2000; Koremenos, Lipson, and Snidal 2001; Gutner 2005; Jupille, Mattli, and Snidal 2013.

[52] Raustiala and Victor 2004; Forman and Segaar 2006; Alter and Meunier 2009; Biermann, Pattberg, van Asselt, and Zelli 2009; Morse and Keohane 2014.

The rational design literature is relevant for our purpose because it can explain the establishment of trust funds. While we will analyze donor participation decisions rather than decisions about the establishment of new funds, in the case of trust funds these decisions are generally identical. Trust funds hosted at international development organizations are temporary mechanisms, often created in an ad-hoc manner and with a donor base that usually changes little, if at all, over the lifetime of the fund. These characteristics distinguish trust funds from more sustainable institutional choices – such as legally independent multilateral organizations – although a small percentage of trust funds evolve into independent multilaterals.

Two more recent contributions may suggest more specific reasons for the rise of trust funds. Julia Gray raises the issue of "zombie organizations" that endure despite generating no significant outputs.[53] For donor countries that are averse to zombies, trust funds are a useful institutional mechanism because they do not face problems in attracting qualified staff, while being relatively easy to dismantle once they have served their purpose.[54] Tana Johnson notes that states are not alone in establishing international organizations, but that international bureaucrats shape the design of "organizational progeny."[55] Bureaucrats have an incentive to enter the design stage as they see an opportunity to design greater insulation from member states. In most cases, notably when states lack relevant expertise and when their stakes are not too high, states willingly cede some autonomy to bureaucrats as a means of incentivizing them to contribute their expertise.[56] This may answer the question why a state would ever use a single-donor trust fund rather than implementing the same program using traditional bilateral aid mechanisms. In particular, we would

[53] Gray 2015

[54] Interview with Director, August 9, 2013. Also see Tortora and Steensen (2014: 31) on how "sunset clauses set a clear end date" for trust funds, reflecting the idea that they "should be temporary financing mechanisms for specific aims," and preventing "the growth of dormant funds."

[55] Johnson 2014.

[56] Johnson and Urpelainen 2014.

expect a state to do so if it desires to maintain control over the aid program but lacks the capacity for implementation. To the degree that trust funds can be conceived as "organizational progeny" emanating from international development organizations, our paper also relates to this novel strand of the institutional design literature.

The second strand of literature examines how donors allocate their aid budgets. This vast literature dates to the 1970s and establishes the general motivations for provision of foreign aid by donors.[57] A major theme of this literature distinguishes donor interest and recipient need as primary motives. Similar motives should apply to donors' choice of trust funds. In particular, the specific strand of the aid allocation literature that compares allocations of bilateral donors to those of multilateral donors should provide analogues for our study. Just as multilaterals' allocations appear to be oriented more than bilaterals' towards recipient needs,[58] we should expect larger MDTFs to reflect development objectives more than small MDTFs or SDTFs that can be used as alternatives to bilateral aid in pursuing geopolitical or commercial interests.

The third strand of related literature deals with regime choices between bilateralism and multilateralism.[59] We focus on the set of studies that more narrowly analyze the choice between alternative existing aid channels.[60] Two studies by Helen Milner and Dustin Tingley, and Christina Schneider and Jennifer Tobin, are most closely related to our work and will therefore be discussed in more detail.

In the Milner-Tingley study, donors choose between bilateral aid and multilateral aid and thereby trade off the burden-sharing benefits against the loss of control from delegating to multilaterals. If donors find their preferences to be aligned with the priorities of multilateral agencies, the greater benefits of burden-sharing through

[57] Early examples are, e.g., Dudley and Montmarquette 1976; McKinlay and Little 1977; Maizels and Nissanke 1984; Frey and Schneider 1986.

[58] See, e.g., Maizels and Nissanke 1984; Headey 2008; Birdsall, Kharas, Mahgoub, and Perakis 2010; Knack, Rogers, and Eubank 2011.

[59] Rixen and Rohlfing 2007; Thompson and Verdier 2013.

[60] E.g., Bermeo 2008; Dietrich 2013; Milner and Tingley 2013; Schneider and Tobin 2016.

multilateral aid can make it the preferred choice. Conversely, if preferences are poorly aligned, donors are more likely to prefer bilateral aid than to give up control to a multilateral. In contrast to their model, a donor in our model considers preference alignment with other donors on an issue that may be the subject of a trust fund, rather than alignment of its preferences with those of a multilateral agency. In the new and flexible world of trust funds, alignment with existing agencies becomes less relevant as a new institution can be quickly established responding to the preferences of its contributors.

Schneider and Tobin study donors' contributions to different multilateral agencies. When choosing among multilateral institutions, donors trade off policy compatibility against risk aversion. Benefits from delegation increase when aid is channeled through multilaterals with policies that best match the bilateral's own preferences, but only up to the point where further concentration of funding to those organizations incurs excessive risk, such that the donor prefers to diversify its contributions among more multilaterals. Excessive risk in this context refers to the possibility of sudden changes in a multilateral's policies, or in its efficiency. This theoretical approach has the advantage of providing an argument as to why the typical donor spreads its funding over numerous multilateral agencies.

In our study, we ensure the existence of intermediate choices (regarding the number of participating donors in a trust fund) by assuming that as the number of donors to a fund increases, other things equal, preference homogeneity among them declines, while the burden-sharing benefits increase. Hence, the donor's utility from participating in a trust fund on a given issue can increase with the number of other donors up to a point but then decrease. The optimal number of partners in the fund will often be greater than zero but less than the number of donors contributing to a multilateral such as IDA. In contrast, the donor's decision in Milner and Tingley is dichotomous: it will choose either bilateral or multilateral aid.

4 Theory and hypotheses

4.1 Theoretical argument

We posit that each sovereign donor first takes a decision about (core) multilateral aid (often fixed through long-term international commitments) and about (pure) bilateral aid, i.e., aid implemented directly by bilateral agencies or their partners such as local non-governmental organizations. Once this decision is taken, the remaining aid budget is allocated to multi-bi aid. As highlighted by the ellipsis in Figure 4, this allocation process is our focus. The question whether and under which conditions multi-bi aid is preferred to bi- or multilateral aid in the first place is equally interesting, but its analysis requires a different data structure, based on disbursements by sovereign donors rather than on fund membership.[61] Moreover, even when focusing on the options within multi-bi aid alone, we can basically cover the full range of options. This is because at the extremes, multi-bi aid offers (almost) perfect substitutes to traditional bilateral, and traditional multilateral aid respectively. Therefore, we do not lose much by excluding these traditional aid flows from our analysis. Concentrating on the choice between different types of multi-bi aid, we develop our argument verbally in this section but refer readers to the Appendix for a formal presentation.

[Figure 4 here]

Multi-bi aid can be allocated to trust funds of different sizes, varying from SDTFs to large MDTFs. For illustrative purposes, we consider the choice between three types, namely SDTFs, small MDTFs (with two to four donors), and large MDTFs (with five or more donors).

[61] Papers examining donor choices between aid channels are, e.g., Eichenauer and Reinsberg (2016) and Eichenauer and Hug (2015). These papers, however, cannot take into account the large variation among trust funds, which we believe is a crucial feature to understand donor decision-making. We return to some data-related challenges to estimating the full decision tree in the empirical section.

When choosing in which trust funds to participate, a donor considers the utility that it could gain from participating in each possible fund. Assuming that each donor faces a budget constraint that allows for participation in only a limited number of funds, the donor chooses to engage in those funds that provide the highest utility. The role of the budget constraint is to ensure that not every donor is a member of every fund, provided that the utility from joining any fund is generally positive.

To unpack the utility function, we posit that any individual donor cares about both efficiency of resource use and the maintenance of control in its delivery of foreign aid. In this regard, the overall number of participating donors plays a critical role. By cooperating with other donors, a donor can achieve efficiency gains, for instance due to synergies, economies of scale, risk sharing opportunities, or the prospect of contributing to important results with limited resources. Following Milner and Tingley, we refer to these advantages from cooperation more generally as "burden-sharing" benefits. These burden-sharing benefits to a donor from participating in a fund increase with the number of other donors to the fund. However, any given donor will also have to compromise more on the priority objectives of the fund, as the number of other donors increases. Large divergences in preferences among donors reduce the utility of individual participation by lowering the degree of control for each donor. With greater preference heterogeneity, transaction costs associated with finding a consensus will increase, and the congruence between that consensus and each donor's own objectives will be reduced.

Our argument that a donor considers the potential for burden-sharing with other donors and the extent of preference homogeneity is supported by our interviews.[62] For example, an Executive Director from a small donor country said: "Multi-donor trust funds are a vehicle to help in areas where we would have no pathway to

[62] Our study benefits from more than 80 interviews, conducted with World Bank staff members and Executive Directors in Washington D.C. from 07/16/2013 to 08/29/2013. Further details are available from the authors on request.

do anything and where we can expect more impact from our tiny contribution."[63] Another Executive Director, from a large donor country, said that global funds would be a useful mechanism to "catalyze aid from other donors [...]."[64] Donors also emphasized that sometimes there might be only a limited subset of donors with similar preferences, leading to small-n funds rather than large-n funds. For example, one Executive Director from a Nordic donor country explained that "[w]e give core funds wherever possible, but we also go into basket funding with other progressive, like-minded donors,"[65] while yet another donor representative observed that "[t]here is always a tension between efficiency [...] and bilateral interests."[66]

Both preference homogeneity and burden sharing benefits depend on the number of other donors participating in a fund. Because the former decreases while the latter increases with the number of other donors, it is easy to model the situation such that for a given trust fund choice, the utility of participation first increases and later decreases in the number of other donors. The optimal number of partners in a fund can be between zero and the universe of all donors.

We are not able to measure directly preference homogeneity and burden-sharing benefits in a systematic way for a large sample of trust fund decisions. Our empirical tests instead rely on issue-area and donor-country characteristics that plausibly reflect variation in preference homogeneity and/or burden-sharing benefits. In the next section we generate testable implications about how these characteristics should influence donors' choices among SDTFs, small MDTFs and large MDTFs, based on arguments about how these characteristics affect the considerations for preference homogeneity and burden-sharing benefits.

[63] Interview with Executive Director, August 27, 2013.
[64] Interview with Executive Director, August 20, 2013.
[65] Interview with Executive Director, August 6, 2013.
[66] Interview with Executive Director, August 19, 2013.

4.2 Hypotheses and operationalization

As mentioned above, our argument that the donors trade off burden-sharing and preference homogeneity is not directly testable with quantitative data, but we can exploit variation in sector and donor characteristics that are plausibly associated with this tradeoff. For example, in an issue area in which ex-ante donor preferences are relatively more aligned, adding one more donor increases heterogeneity only slightly. Thus, the gains from burden-sharing are more likely to outweigh the losses from preference heterogeneity, and a donor should choose a large-n fund. Conversely, if a donor country has a high ex-ante valuation of individual control in aid allocation, the burden-sharing benefits are less likely to outweigh costs from the loss of control in adding more donors, and the donor will choose a small-n fund. As these types of circumstances related to issue areas and donor characteristics are measurable, we are able to assess the usefulness of our model in explaining when donors choose small, mid-sized or large trust funds.

In the following, we formulate six testable hypotheses regarding donor's choice of trust fund size types (SDTFs, small MDTFs and large MDTFs). Note that the sectoral and donor-specific characteristics on which these arguments focus are certainly not the only ones that could influence the balance between preference homogeneity and burden sharing. Our choice of appropriate variables is restricted by the availability of adequate indicators at the trust-fund level. However, we believe that our set of variables is comprehensive enough to demonstrate the mechanisms at work if donors in fact trade off between preference homogeneity and burden sharing as posited above. The specific variables that we consider relate to donors' general sectoral preferences, the state of their economies, recipients' income levels, and the thematic orientation of the trust fund towards fragile states, global public goods, or generally, topics that have made it onto the agenda of restrictive clubs of industrialized countries (i.e., G8). In the following, we will discuss one by one how these variables are expected to influence the balance between preference homogeneity

and burden-sharing, and the related choice of the optimal trust fund size-type from the perspective of the individual donor.

Ex-ante sector variation of donor interests

We argue that the degree to which an additional donor in the trust fund affects preference homogeneity depends on how much ex-ante preferences are aligned. We particularly consider preferences in development sectors, because almost all trust funds are earmarked for activities with a particular sectoral focus, but only a minority of trust funds are earmarked for activities in specific countries (see Section 2). In contrast to the (unmeasurable) concept of preference heterogeneity used throughout our model, we refer to "*ex-ante* variation of sector focus" to denote our indicator of heterogeneity in donor's preferences over sectors, measured independently of their actual participation in the various trust funds.

In some sectors, ex-ante variation in donors' focus on the sector is higher than in others. Where donors agree more about the importance of a sector, it is arguably more likely they can readily agree on activities and objectives for a trust fund devoted to that sector. In that case, adding more donors to the fund should not substantially decrease preference homogeneity. Hence, a donor can benefit from burden-sharing without incurring strong losses from a dilution of focus within the fund, or risking a shift in the fund's objectives away from its preferences. Conversely, if donors' views on the sector's importance are more varied, the less willing donors should be to invest in large trust funds.

H1. In an issue area with high ex-ante variation of sector focus among the donors, a given donor prefers to participate in small trust funds as opposed to large trust funds.

A standard way of measuring ex-ante preference variation between donors is by looking at differences in the shares of aid allocated to individual sectors (i.e., issue

areas) in each donor's bilateral aid portfolio. If all donors provide a similar share of bilateral aid to a sector, we consider that interests in this area are relatively aligned. In contrast, a strong variation in bilateral aid shares for a given sector indicates ex-ante variation of sector focus and should aggravate the problem of preference heterogeneity when adding more donors to a trust fund.

Accordingly, we measure ex-ante variation of sector focus by calculating the coefficient of variation in the sectoral shares of bilateral aid, for the sector(s) relevant to the respective trust funds, by all donors covered in the OECD/DAC's Creditor Reporting System (CRS).[67] Admittedly, this measure is not perfect, because for example donors may have different ex-ante preferences over sub-sectors (such as primary vs. secondary education) within a sector, or about specific goals (such as enrollment vs. quality of schooling). Disagreement over sectoral priorities, however, is likely to be correlated with the level of disagreement on some subsidiary issues, e.g., the same donors with above-average preferences for education aid will tend to have above-average preferences for aid for primary education. Moreover, this method is consistent with other studies that use bilateral aid to measure and compare individual donor preferences.[68]

Note that donor preferences over sectoral allocations may differ even if their aid is motivated purely by development objectives. For ideological or other reasons, some donors, for example, may emphasize government provision of education and health services as the crucial path to development, while others may emphasize private sector development. However, donors may have differing sectoral preferences for geopolitical or commercial reasons as well. Either explanation is consistent with hypothesis 1.

[67] See OECD 2014b. For a full definition of this variable, see Table 9 in the Appendix.
[68] Lyne, Nielson, and Tierney 2009; Copelovitch 2010; Schneider and Tobin 2016.

Joint priorities in global governance

When donors have a joint interest in acting upon a common development challenge, adding more donors can increase the burden-sharing benefits, with little or no negative impact on preference homogeneity. For instance, when a topic is discussed at the level of the G8 and commitments are made, one can infer that the issue requires some common action and that there is some commonality of interests among most of the G8 member states.[69]

The Global Agriculture and Food Security Program (GAFSP) is a frequently mentioned example of a World Bank trust fund emanating from a G8 summit.[70] At the L'Aquila summit in 2009, G8 leaders expressed their concern about hunger and poverty caused by soaring food prices, lack of investment, and the global financial crisis. Recognizing the "urgent need for decisive action," they promised to "[...] partner with vulnerable countries and regions to help them develop and implement their own food security strategies, and together substantially increase sustained commitments of financial and technical assistance to invest in those strategies."[71] A number of international organizations including the World Bank attended the summit and endorsed the statement of the G8. In total, leaders pledged USD 22 billion for food security over three years. USD 800 million were ultimately committed to GAFSP, which was established one year after the L'Aquila summit.[72]

This example demonstrates that issues adopted at G8 summits typically imply a strong consensus among the G8 leaders. This alignment of preferences may catalyze joint funding for initiatives addressing common-priority development problems.[73]

H2. If a given development issue has benefited from donor pledges at the previous

[69] See also Copelovitch and Putnam (2014), who emphasize that prior agreements create an "institutional context" that influences the terms of additional cooperation.
[70] Interview with Adviser, Sustainable Development Network, World Bank (August 2, 2013).
[71] G8 2009.
[72] G8 2010.
[73] Panneels and Beringhs 2005.

G8 summit, a given donor is more likely to support this issue through a multi-donor fund rather than a single-donor trust fund.

We measure trust funds' relevance to the G8 by donors' rhetorical commitments at preceding summits. Specifically, for each trust fund, we count the number of its sectors for which pledges were made at the G8 summit in the year prior to trust fund activation.

Financing of global public goods

The salience of donor cooperation is even more evident when it comes to addressing global challenges such as climate change or the spread of communicable diseases. Activities in these areas benefit all donors, so preferences will be relatively homogeneous. Moreover, a large common effort is likely to be required to produce satisfactory results, so burden-sharing benefits will be relatively high. Hence, in the area of global public goods, cooperation among many donors appears as the most effective form of intervention. This leads to our next hypothesis:

H3. If a donor wishes to contribute to the supply of global public goods, it is more likely to operate through large MDTFs instead of using small MDTFs or SDTFs.

We use a dummy indicator variable for global activities that is based on the World Bank's own classification of trust fund activities.[74] An activity is global if its benefits do not accrue to any single recipient country. The IEG confirms that global activities are usually related to the provision of global public goods.[75] Hence, our understanding is that trust funds for global activities primarily support the provision of global public goods.

[74] World Bank 2014a.
[75] IEG 2011: vii.

Assistance to fragile states

Risk-sharing is one aspect of burden-sharing benefits that is particularly relevant in certain contexts, such as assistance to fragile and post-conflict states.[76] When the activities of a fund are perceived as high-risk, cooperation among multiple donors allows the risks to be shared. In some high-profile cases such as Afghanistan, there are risks that large-scale peace-keeping and state-building programs may fail, and the reputational costs to a single donor responsible for such a program in the event of failure could be prohibitive.[77] In the event of a successful program, on the other hand, all involved donors could share in the credit. Even in cases where a donor can be relatively confident about the success of a program overall, some specific projects may fail. When many donors contribute, the project portfolio can be larger and more diversified, hence reducing the risk that publicity surrounding one failed project will outweigh a larger story line of success. Moreover, it is politically useful for a donor to share the responsibility with other donors if individual projects turn out to be problematic. Risk sharing is particularly relevant in the context of fragile states, e.g., post-conflict states such as Afghanistan. Assistance to fragile and post-conflict states is also likely to be an area where donors have strong common interests, as instability, conflict, and insecurity are problems that tend to spill across borders. For larger fragile or post-conflict states (such as Afghanistan) the spillover effects of conflict could be global, but even for smaller ones with regional effects (e.g., the Solomon Islands) there are likely to be multiple donors with similar interest in cooperating through a trust fund. Our next hypothesis can thus be stated as follows:

H4. In assisting fragile states, a donor is more likely to participate in multi-donor trust funds than in single-donor trust funds.

[76] In a recent World Development Report, the World Bank writes "International engagement in fragile and conflict-affected states (FCSs) poses considerable risks for donors and implementing partners [...]" (World Bank 2014d: 264).

[77] World Bank 2014d: 263.

A binary indicator variable for whether a trust fund supports fragile states can be drawn directly from the World Bank trust fund database.[78]

Assistance to middle-income countries

Assistance to middle-income countries (MICs) was frequently mentioned in our interviews as a key motive underlying trust funds. Grants and concessionary loans from IDA, the IMF and regional development banks are not available to MICs, so they may face a higher risk of running into a financing gap for their development needs. As one Executive Director stressed: "Trust funds are really important in MICs [...] there is consensus on that."[79] However, agreement on this point does not necessarily mean that donors agree on the specific MICs to which they want to extend their assistance. Aid to MICs is a case where donor-specific interests are likely to predominate over recipient need in the choice of recipient countries. The promotion of donors' commercial and geopolitical interests has been emphasized in the aid allocation literature as an important motive for providing development assistance.[80] In MICs, donors may compete for trade access or other commercial and geopolitical objectives. Even where they do not compete, some donors will have a stronger interest than others due to geographic proximity or cultural, linguistic and/or historical ties. Where such interests are at stake, donors' preferences will tend to differ more than when their aid is responding to recipient need. In some cases – Jordan is arguably an example – the geopolitical interests of most donors may coincide in aiding a MIC. In general, however, donors will have fewer common interests when using trust funds to aid a MIC than when using them for other purposes, such as aiding fragile states or financing provision of global public goods. We

[78] See World Bank 2014a. Some trust funds support more than one fragile state, so this binary indicator is more straightforward than alternative indicators of country risk, that would require aggregating in some way and that in any event are unavailable for some fragile states.

[79] Interview with Executive Director, August 19, 2013.

[80] E.g., Berthélemy 2006; Bueno de Mesquita and Smith 2009.

can thus formulate our second hypothesis:

H5. A donor prefers to channel its support for middle-income countries through small trust funds as opposed to large trust funds.

Donors have full discretion in limiting a trust fund's disbursements to countries that are not eligible for IDA allocations. We construct the dummy variable "middle-income country assistance" to capture such a restriction, based on IBRD/IDA eligibility status as available from the trust fund database.[81]

Economic hardship in the donor country

An economic downturn in the donor country can lead to increased emphasis on the use of aid for donor interests and specifically for commercial benefits, rather than for development objectives broadly shared within the donor community. Particularly when unemployment is relatively high in the donor country, combating poverty at home will become more of a priority relative to combating poverty overseas. Parliamentarians, voters and interest groups in the donor country may favor earmarking aid more narrowly, so that it can potentially be delivered in ways that support job creation or other commercial benefits to the donor country. In this context, a donor's preferences for earmarked aid are less likely to be aligned with those of other donors, and may even conflict with them.[82] This argument leads to our third hypothesis:

H6. If a given donor country faces increased unemployment, it will participate more in small trust funds relative to large trust funds.

[81] See World Bank 2014b. Many trust funds are not limited to specific countries, so a MIC-only dummy is simpler than constructing a (continuous) income measure for a trust fund's recipient countries. Moreover, it arguably better reflects donor motives of aiding countries of particular geopolitical or commercial importance that are ineligible for IDA. Note in using the term "middle-income" as shorthand for "IDA non-eligible," we are not referring to the World Bank's income classification system, which is separate from its lending categories.

[82] Interview with Lead Operations Officer, August 26, 2013.

Unemployment rates (in percent) for all bilateral donors are taken from the World Development Indicators (WDI).[83]

5 Empirical analysis

5.1 Estimation strategy

Our theoretical focus is on the determinants of donor choices to join different types of trust funds. Empirically, however, we ideally would want to estimate a fuller model in which the donor country first allocates its aid budget between trust funds, other bilateral aid, and core contributions to multilateral agencies, and then chooses in which trust funds to participate (see Figure 4). The key advantage of such an approach would be to account for potential unobserved confounders that introduce correlated decisions.[84]

Unfortunately, this approach is infeasible due to the lack of common data structures in both stages. The first stage uses total amounts allocated to each general aid type, whereas the second stage considers participation decisions of the donors in various institutional arrangements that jointly define multi-bi aid. In addition, as we are interested precisely in the determinants of donor participation in the various trust funds, we would unduly sacrifice meaningful information if we aggregated all donor participation decisions within a particular trust fund type.

Our empirical analysis therefore remains focused on the second stage. This approach yields consistent estimates when all confounders are observable and controlled for in the empirical analysis. In our case, this is quite possible because the propensity of a donor to engage in trust funds largely depends on its available aid budget. Moreover, even when there are unobservable factors for which we fail to

[83] See World Bank 2014b. We considered other measures to capture economic hardship, for example budget balance, inflation, growth, and output gap, which yield qualitatively comparable results.

[84] Heckman 1976.

control, these factors do not affect the consistency of the differences in estimated coefficients across equations, so long as they only affect the baseline probability that a donor joins a trust fund. In other words, to produce inconsistent estimates a potential confounder must affect the relative attractiveness of different fund types.

When unobservables introduce correlation between the first stage and the second stage in the latter way, our approach may yield biased estimates. This is particularly likely in two cases. First, a potential trust fund of a particular type might not be observed because the donor chose to allocate aid to one of the two traditional aid types. Second, a donor may perceive a fund to be less attractive because some specific other donor is a member, which more generally reflects cross-sectional dependence.

Based on qualitative evidence, we argue that the first bias is negligible. Staff interviews suggest that confounders in this case are likely time-invariant, for example because a certain type of donor prefers SDTFs for some unmeasurable reason.[85] Such a bias is eliminated when using fixed effects.

To mitigate the second bias, we present estimates based on two trust fund "choice sets" that reflect different assumptions on the counterfactual. In line with the model, all possible trust funds should be considered. However, information is available only for trust funds that actually exist. To generate the full data set, we proceed with two alternative assumptions leading to two choice sets. In choice set A, we assume that within each group of trust funds (SDTFs, small MDTFs, and large MDTFs), any fund that is used by at least one of the donors could have been chosen by any other donor also. As an example, when Switzerland agrees with the World Bank on a SDTF in any specific area, we assume that any other donor could have made the same kind of arrangement. Similarly, if there is a MDTF in a given area, we

[85] SDTFs are known to be used by "emerging donors" that have not yet found their "comfort zone," whereas established donors are more reluctant to create SDTFs given their impact on fragmentation (Interview with Trust Fund Coordinator, August 8, 2013).

assume that those donors that do not participate in this fund would in principle also have had the option to do so. In choice set B, we allow for any observed fund to be counterfactually conceived as any of the other trust fund types: For all funds that exist in the form of one particular fund type (as included in choice set A), the two other fund types would also have been possible (choice set B). This implies, for example, that a specific SDTF that the Netherlands used to channel money through the World Bank could have been set up alternatively as a small MDTF or even a large MDTF. This greatly increases the number of observations in the dataset by adding further zeros for non-membership (since many of the potential funds never came into existence in reality), and hence makes it unlikely that we miss out a potential fund whose existence is related to some unobservable factor. Note that it is not clear a priori which choice set is more plausible in practice.

Last but not least, we acknowledge that our inferences are based on observational data, and caution should be exercised in interpreting our findings as causal. However, we apply conventional remedies such as fixed effects in order to mitigate potential omitted-variable bias.

5.2 Data

Having discussed the challenges related to the empirical analysis of our argument, we describe the data structure and related estimation techniques in the following. To test our hypotheses, we use a dataset of all World Bank Group trust funds that received at least one contribution within fiscal years 2002-2013.[86] The donors considered are the 24 DAC member countries for which information on trust fund membership and a range of key predictors are available.

The dependent variable is a binary indicator reflecting the participation of each

[86] See World Bank 2014b. Our dataset includes the full population of trust funds at the public-sector branch (i.e., IBRD/IDA trust funds), and the private-sector branch (i.e., IFC trust funds) of the World Bank Group. As mentioned earlier, the longest time span available to observe trust fund participation decisions ranges from 2002 to 2013.

individual donor i in fund f.[87] Trust funds were created in different years, and the corresponding year effects can be controlled for, but note that we do not have time-series cross-sectional panel data, as each fund is observed only once for each donor.

We run the estimations separately for SDTFs, small MDTFs, and large MDTFs, using robust linear probability models with standard errors clustered at the level of donor countries. Given that each donor country faces a budget constraint that implies that its participation in a number of funds may preclude participation in another fund, we consider that the decisions are not taken independently of each other. Possible correlations of errors across equations are taken into account using seemingly unrelated estimation with unbalanced equations, a method that uses a common variance-covariance matrix for the different regressions.[88] The observation numbers across equations are unbalanced because the World Bank managed far more SDTFs than MDTFs over the 2002-2013 period. Robust estimation can flexibly handle this lack of balance. To test our hypotheses, we conduct Wald tests to compare coefficients across equations.

In the Appendix, we also show a replication of the same regressions for different definitions of small versus large MDTFs. Because the cutoff point is somewhat arbitrary, we should be able to confirm that a small change will not substantially affect our results. In addition to the cutoff between 4 and 5 donors used so far, Tables 6 and 7 present estimations for cutoffs between 6 and 7, and between 10 and 11 donors. Given that few funds comprise many more than 10 members, the latter is already a relatively big step that tends to blur the distinction between the two categories. The outcomes are generally in line with these expectations.

[87] See equation 3 in the Appendix. We also considered using contribution amounts for a robustness check, but the necessary data are not available.

[88] See Zellner 1962. We employ the *suest* routine for Stata to run these estimations (McDowell 2004). This approach also follows the standard guidance on the estimation of fixed-effects panel data systems (Blackwell 2005).

For each block of three regressions corresponding to the three categories of funds, we use exactly the same specification. The first block includes only six variables corresponding to the six hypotheses listed above, without fixed effects or other controls. The second block includes fixed effects for donor countries and for trust fund starting years.[89] The third block adds more controls, including variables related to bi- and multilateral aid as alternative funding options to multi-bi aid as a whole. Moreover, they include a variety of indicators capturing the (development-related and general) know-how and capacity of the donor country. Such capacity should generally reduce the need to use the multilateral channel, given the conventional wisdom that expertise and knowledge are key reasons for delegation to multilaterals.[90] Finally, we include a binary indicator variable for particularly contentious issues, as identified from a small expert survey carried out within the World Bank.[91] Creating a trust fund pertaining to one of these issues allows donors to circumvent lengthy or divisive debates within a multilateral's decision-making body, where not only the big traditional donors but also MICs have an influential voice. All variables and their sources are described in more detail in the Appendix, Tables 8 and 9.

5.3 Findings

Tables 1 and 2 show the results for choice sets A and B respectively. As expected, the larger the variation in ex-ante bilateral sectoral aid preferences, the lower is the propensity of any donor to contribute to large MDTFs. This result is robust across specifications. In Table 1, an increase in the coefficient of variation by one standard deviation leads to a 13 percent decrease in the probability that any given donor joins such a large fund, whether or not fixed effects or control variables are included. This

[89] A Hausman test indicates that random effects specifications would lead to inconsistent coefficients.
[90] Rodrik 1995.
[91] World Bank 2013b.

is a substantively meaningful effect.[92] Wald tests (Table 3) confirm that differences in the effects of ex-ante variation of sector focus on the likelihood of joining large-n funds versus small-n funds (small MDTFs or SDTFs), are statistically significant.

Coefficients on ex-ante variation of sector focus are similarly signed and statistically significant in Table 2. Coefficient magnitudes appear to be much smaller, however, due to the much larger number of "0" observations in choice set B. For large MDTFs, the dataset size increases tenfold, with the addition of numerous observations for potential funds that did not come into existence. This addition reduces the baseline probability for being a member of any of these multiple potential funds to about one tenth of its initial value. A similar reduction in coefficient magnitudes is a normal consequence of this reduction in the mean of the dependent variable, and thus consistent with the results of Table 1. In fact, a one standard-deviation increase in ex-ante variation of sector focus reduces the participation probability in large-n MDTFs by 25 percent in relation to the baseline probability.[93] As shown by Table 4, Wald tests again confirm the distinctiveness of large-n funds as compared to small-n funds.

Prior pledges at the G8 should reflect a common interest of at least some donors in certain sectors. As expected, this variable is associated with increased participation in (small or large) MDTFs as opposed to SDTFs; for the latter, the coefficient is always negative but in most cases insignificant. Results for the G8 variable are statistically significant more often for choice set B than for A. This pattern can also be seen from the corresponding Wald tests (Table 4), which indicate positive and significant effects of G8 pledges at each step, moving from SDTFs to small MDTFs to large MDTFs. One representative from a large donor explained that "[f]or polit-

[92] The baseline probability that any donor joins a large-n MDTF is 32 percent. The estimated reduction in the probability for a one standard-deviation increase in ex-ante variation of sector focus ($sd = 0.26$) is 4 percentage points, which in relative terms is 13 percent.

[93] For a standard-deviation increase in ex-ante variation of sector focus ($sd = 0.26$), the likelihood of participation in large-n MDTFs falls by 0.7 percentage points. This equals a relative change of 25%.

ical reasons, it is difficult to decline participation in high-level multi-donor funds," citing the Global Agriculture and Food Security Program (GAFSP) and the Middle East and North Africa Trust Fund as two such examples.[94]

An even more robust relationship is observed between global activities and trust fund participation. In line with our hypotheses, no matter the specification and the choice set considered, trust funds supporting global activities tend to include multiple donors. The probability of participating in a large MDTF increases by more than 32 percent in choice set A (and doubles relative to the baseline probability in choice set B) if it funds global activities. This effect is significantly larger than the corresponding effect on small MDTFs funds (between 4 and 6 percent in choice set A; between 20 and 24 percent in choice set B), which is in turn significantly higher than for SDTFs (negative coefficients, not significantly different from zero). All differences across trust fund types are strongly significant, as shown by Wald tests in Tables 3 and 4.

In our interviews, donor officials explicitly mentioned climate change as a global challenge that would require their cooperation, preferably through MDTFs.[95] One staff member speculated that trust funds enabled donors to show progress in climate change.[96]

Results are also strong for trust funds with a focus on fragile states, which tend to take the form of large MDTFs, consistent with the view that risk sharing is an important consideration for these funds. For funds supporting fragile states, the relative increase in the propensity to become a member is between 17 and 22 percent in choice set A if it is a large MDTF, and about 80 percent in choice set B. According to the Wald tests, differences across all fund types are significant in choice set B (Table 4). The significant difference in coefficients between small and large MDTFs

[94] Interview with Executive Director, August 22, 2013.

[95] Interview with Executive Director, August 19, 2013, who mentioned climate change among the top-3 issues for a multilateral effort, aside from gender inequality and fragile states.

[96] Interview with Adviser, August 2, 2013.

is consistent with the possibility that a subset of donors may have a disproportionate interest in certain fragile states, where potential spillover effects are perceived to be regional rather than global. However, the Wald test cannot establish a significant difference between SDTFs and small MDTFs in choice set A (Table 3).

A large number of donors interviewed at the World Bank (including Australia, Belgium, the European Commission, Germany, the Netherlands, the Nordics, and the United Kingdom) said that they wished to see the World Bank doing more on fragile states. World Bank staff also pointed to studies that pioneer MDTFs as a useful instrument for post-conflict situations.[97]

The hypothesis that aid for middle-income countries tends to be motivated by donor-specific interests – and should hence lead to the use of SDTFs rather than MDTFs – is only partially supported. Results in Table 1 are mostly supportive, but not those in Table 2 based on the larger choice set B. For this MIC-assistance indicator, the outcome thus hinges on the beliefs about the more appropriate option space for bilateral donors. If we believe that choice set A is more appropriate (because, for instance, the multilateral agency might not be willing to host trust funds of all types in all areas), then the results indicate that a large MDTF has a (27 percent) lower probability of receiving contributions from any donor if it targets MICs.[98] In general, a focus on MICs tends to reduce the likelihood a fund receives contributions, but this effect is significantly increased for large MDTFs. Wald tests for choice set A show significant differences across all fund type comparisons except between SDTFs and small MDTFs (Table 3). For choice set B, we cannot confirm our hypothesis as all cross-equation coefficient differences are insignificant (Table 4).

Coefficient estimates for unemployment are the only ones within each choice set that are highly sensitive to the inclusion of fixed effects and other controls. In the

[97] Interview with Senior Operations Officer, July 23, 2013. For relevant policy papers, see Guder (2009), Barakat (2009), and IEG (2011).

[98] Again, we express the absolute change of 9 percentage points relative to the baseline probability of 32 percent, which implies a relative change of 27 percent.

very simple models without fixed effects or controls, these coefficients capture, to a large extent, pure cross-sectional variation. Our hypothesis, however, is not related to the base level of unemployment (associated with structural problems of the economy that cannot be addressed through aid), but to temporary downturns of the economy that may lead donor country governments to use their foreign policies to signal their concern for increasing employment. This reasoning is supported by regressions that control for donor fixed effects. When the cross-sectional variation is controlled for by the fixed effects (with or without additional controls), the coefficients turn positive and partly significant in both choice sets for the smaller two fund types. While this pattern of coefficients is consistent with our hypothesis, Wald tests show that the differences between them are not always significant (Tables 3 and 4).

Qualitative evidence from staff interviews is consistent with these findings on economic downturns. One staff member explained: "The financial crisis changed things: There is more attention from bilateral constituencies [...] and more pressure to account for aid money [...]."[99] World Bank staff generally felt that donor countries increased their tendency to earmark funds after the economic crisis.[100]

[Table 1 here]

[Table 2 here]

[Table 3 here]

[Table 4 here]

Overall, these tests mostly support our hypotheses. Results for ex-ante variation of sector focus and the indicator variables for global activities and fragile states are particularly robust. We also have a tentative explanation for why some relationships do not turn out as strongly as expected. In reality, the type of fund chosen by a donor

[99] Interview with Trust Fund Coordinator in a regional unit, August 27, 2013.

[100] Interviews with Executive Directors, August 21, 2013 and August 22, 2013, and a Program Officer, August 14, 2013.

does not always allow us to infer its actual motivation. On the one hand, donors are sometimes bound by legal rules to channel their support to an SDTF even in a multi-donor partnership. On the other hand, while individual donors cannot legally earmark specific activities in MDTFs, they sometimes use "notional earmarking" to indicate priority areas that the agency seeks to accommodate whenever possible. Our data cannot tell whether any of these situations are present, but our qualitative evidence suggests that they are rare. In statistical terms, these cases imply measurement error in the respective fund category and attenuation bias on the related coefficients, with differences across fund types tending to appear less significant. As both of these sources of measurement error work against finding support for our hypotheses, our coefficients can be seen as lower bounds on the true effect size.

Results for the control variables provide some support for the plausibility of the overall specification. We begin with donor resource variables, which are rarely significant in our tests. Donor wealth as measured by the log of GDP tends to be associated with reduced participation in SDTFs but increased participation in both small and large MDTFs. The coefficient on the log of bilateral aid tends to be negative for the first two types of funds, but positive for large MDTFs, suggesting that smaller trust funds may be closer substitutes for bilateral aid. The share of multilateral aid in total aid is mostly insignificant.

The coefficient estimate for the share of administrative costs (as a percentage of bilateral aid) is negative and sometimes significant for small funds, in contrast to large MDTFs where it is positive. A higher administrative cost share may imply greater capacity (in terms of staff and expertise) for the donor, reducing the need to delegate administrative tasks such as concrete project identification and monitoring to the multilateral agency. However, donors with greater capacity may be more willing and able to exercise influence over multilateral agencies through trust funds. Neither of these potential effects, one positive and the other negative, appears to

predominate in our tests.[101]

We also control for a specific measure of donor expertise or intellectual leadership, namely service by the donor as a chair or co-chair of DAC working parties related to the topic of the fund. As expected, such a role within the DAC is positively related to participation in large MDTFs, although the coefficient is significant only in choice set A. Two broader proxies for capacity do not show any clear relationship with trust fund participation. The number of researchers per 100 workers, and the log of total expenditures on research and development, have opposing effects when included together, and neither is significant when only one of them is included (latter result not shown in tables). A subjective measure of quality of the government bureaucracy in the donor country (from the International Country Risk Guide) is also insignificant. These are admittedly rough proxies: they do not specifically measure research on development and aid, or bureaucratic quality for the government's aid agencies.

Our final control variable that identifies particularly contentious issues within the World Bank does not show the expected positive effect on multi-bi aid in general. The coefficient for the contentious issues indicator is generally insignificant for MDTFs, and positive (and marginally significant) in the SDTF regressions in choice set B. These findings suggest that these topics may be contentious not only among World Bank members as a whole, but also among donors. The contentious issue variable may then be acting as, in effect, a second indicator of ex-ante heterogeneity of donor interests, supplementing the main indicator that is based on bilateral sector allocations.

Our main findings from regressions with fewer control variables are highly robust to including this larger set of controls. They are also unaffected by using

[101] Although the aid variables including administrative costs are lagged, they are likely endogenous (relaying on trust funds may reduce administrative costs), so we include them only as control variables in robustness tests, and caution against over-interpreting their estimated coefficients.

different estimation techniques. In another robustness check, we performed conditional logit estimations, to account for the binary nature of the dependent variable. In these tests, the direction and significance of all effects of interest were virtually unaffected.[102]

Overall, these results are consistent with our general argument that a given donor faces a trade-off between burden-sharing and preference homogeneity when choosing the institutional channel for addressing development challenges, i.e., smaller versus larger trust funds. This trade-off is affected by a range of variables that capture specific characteristics of issue areas and the donor country itself. We obtain strongest support for our argument from variables relating to ex-ante variation of sector focus as well as to global activities and fragile states.

6 Conclusion

Over the past two decades, donor countries have dramatically expanded their reliance on trust funds in their delivery of official development assistance. Trust funds are ad-hoc international institutions that enable individual donors to bypass the formal governing procedures at international development organizations while using the implementing capacities of these organizations to deliver aid earmarked for particular sectors, themes and/or countries.

Unlike traditional bilateral aid, trust funds allow donors to benefit from country, sector, or thematic expertise of the international organization hosting the fund. Trust funds have the added advantages of reduced politicization and – in the case of MDTFs – burden-sharing benefits. Compared to multilateral contributions, trust funds benefit from greater donor control with respect to their activities and their duration – trust funds can expire when they achieve their purposes or when donor interests change, e.g., due to a change in government.

[102] Results can be obtained from the authors upon request.

Trust funds are flexible instruments that cover a wide range of possible institutional setups – from single donor trust funds that are close substitutes to bilateral aid to large multi-donor trust funds that in a few instances have evolved into separate multilateral agencies. This instrument considerably increases the options from which bilateral donors can choose for channeling their aid. We focus on the trade-offs governing the choices among the various types of trust funds. We argue that a given donor faces a trade-off between burden-sharing benefits in funds with many donors and individual control in funds with fewer donors. Key implications of our theoretical model are that individual donor choices vary with external conditions regarding the (thematic and geographic) area of intervention and the economic situation in the donor country.

Based on a seemingly unrelated regression analysis of the World Bank's trust fund database over the last decade, we find that the donor's willingness to opt for (large) multi-donor trust funds is positively associated with ex-ante sector alignment among all donors as well as indicators for global activities and fragile states assistance (for which the gains from burden-sharing are more likely to outweigh the potential loss in control). A donors prefers single-donor trust funds when and where its national (e.g., commercial or geopolitical) interests tend to predominate (e.g., aid to middle-income countries, and when unemployment rates are increasing). While they could use bilateral aid for the same purpose, channeling funds through multilateral agencies lets them benefit from the agency's expertise and reduce administrative cost, particularly in areas where their own capacity is limited. While our rough proxies for donor capacity generally were not significant in our tests, capacity (along with other donor-specific effects) differences are controlled for by the donor fixed effects included in some of our specifications.

We believe that our analysis of donor choices among different trust funds is theoretically relevant. Trust funds are a new form of international institution that is more flexible than full-fledged international organizations but that is not informal.

Trust funds reflect a trend toward global governance in various sets of state coalitions – a trend that also is pervasive in other areas such as international trade.[103] Trust funds have lower sunk costs than international organizations, as they are easy to create and easy to end when they served their purpose or when underlying preferences change, which reduces the likelihood of "zombie organizations."[104] Also, trust funds provide more choice in terms of combining the traditional benefits of bilateral and multilateral aid. Hence, the proliferation of trust funds may be an efficient mechanism for varying coalitions of donors to cooperate when their interests converge on particular development issues at a particular moment in time. Nonetheless, trust funds still involve transaction costs, and there is potential for further reforms to reduce fragmentation, i.e., through consolidating smaller funds with similar objectives. For these reforms to be successful, however, it is important that the determinants underlying the choice of the various trust funds are better understood.

Our data and methodology are not designed to test hypotheses about why donors' use of trust funds has increased so much in recent years. However, our arguments and evidence can suggest some answers. First, our interviews of donor officials and staff indicate that budget constraints following the financial crisis have played a role. By funneling their bilateral aid through the World Bank, they can "get more money out the door with fewer staff." Second, climate change and other cross-border challenges have increased interest among donors in working through MDTFs. As noted in some of our interviews, the country-based aid model of IDA is far from ideal for providing aid in global public goods. Moreover, preferences among the World Bank's board members are not fully aligned in supporting some public goods, such as climate change. Third, as more countries graduate from IDA, there are more MICs that certain donors will want to continue aiding, with trust funds

[103] See, e.g., Kahler (1992) and Foreman and Segaar (2006). For trade-related studies, see, e.g., Mansfield and Milner (1999) and Mansfield and Reinhardt (2003).
[104] Gray 2015.

as one mechanism that continues to employ the Bank's country expertise. Finally, as the relative influence (both formal and informal) of traditional donor countries in the World Bank gradually – albeit slowly – declines, trust funds become a more important means of bypassing the Bank's governance systems, including the need to obtain consensus on aid priorities.

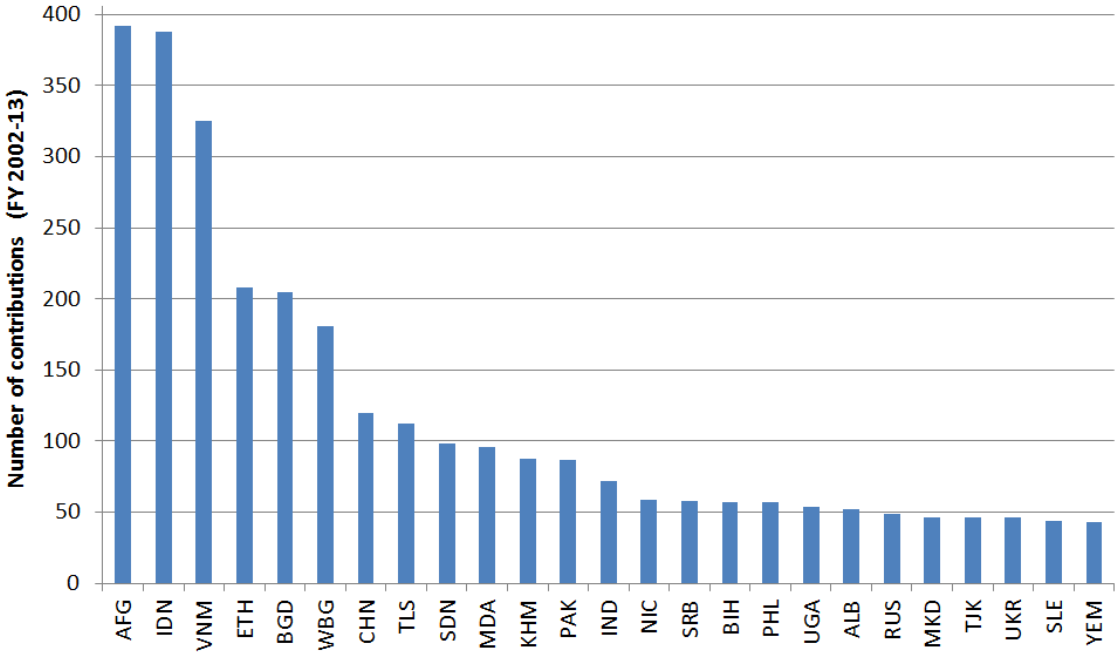
The main theoretical insight of our paper applies to international development organizations more generally. In deciding to join an international organization, a key variable for any donor to consider is the number of other donors: the more donors there are, for any given distribution of policy preferences, the greater are the burden-sharing benefits, but the greater are the costs in terms of the loss of control (with respect to activities and duration). A single-donor trust funds is at one extreme, while a large multi-donor trust fund with essentially all possible donors is at the other extreme. In analogy to trust funds, this trade-off should apply in the creation of any international development organization. But there is a rather limited number of international development organizations.[105] Some of them were created a long time ago, and most donors are members of most of them. Therefore, it would be difficult to construct a dataset of international development organizations with much variation in their size in order to test our hypotheses. The rise of trust funds hence presents an ideal opportunity to test institutional design conjectures.[106]

[105] Schneider and Tobin (2016) only have twelve organizations in their sample, and Milner and Tingley (2013) are limited to focus on the discrete choice between bilateral aid and multilateral aid.

[106] Abbott and Snidal 1998; Koremenos, Lipson, and Snidal 2001; Jupille, Mattli, and Snidal 2013.

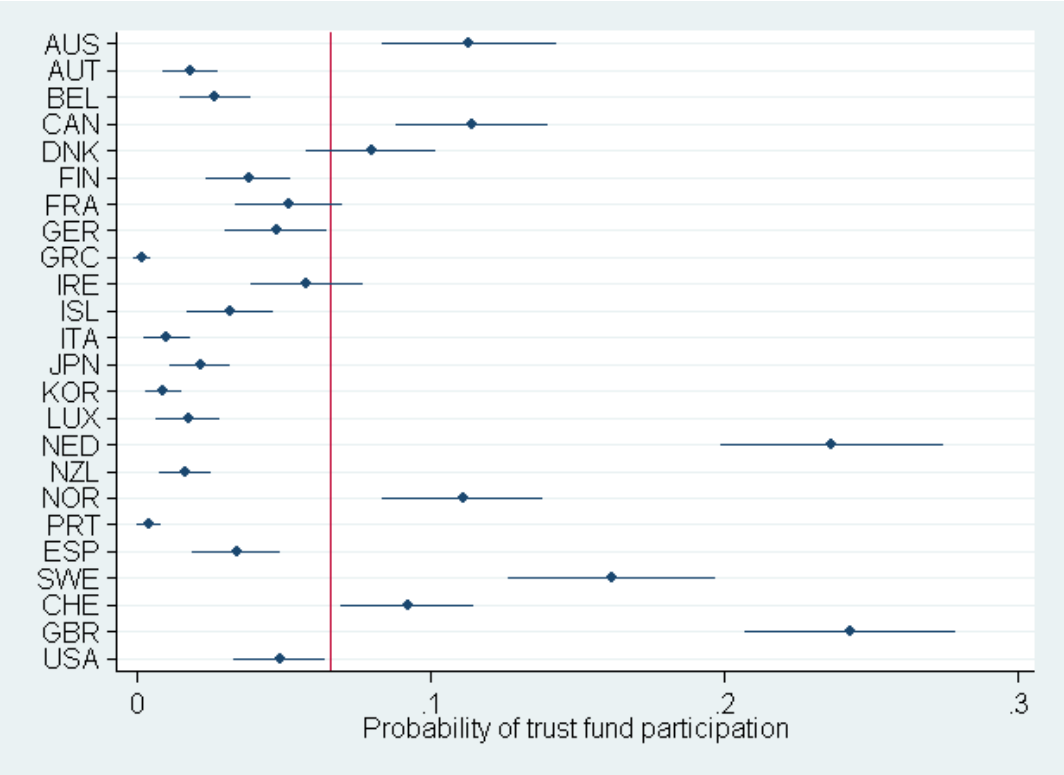
Figures

Figure 1: Top 25 recipient countries of country-specific trust funds



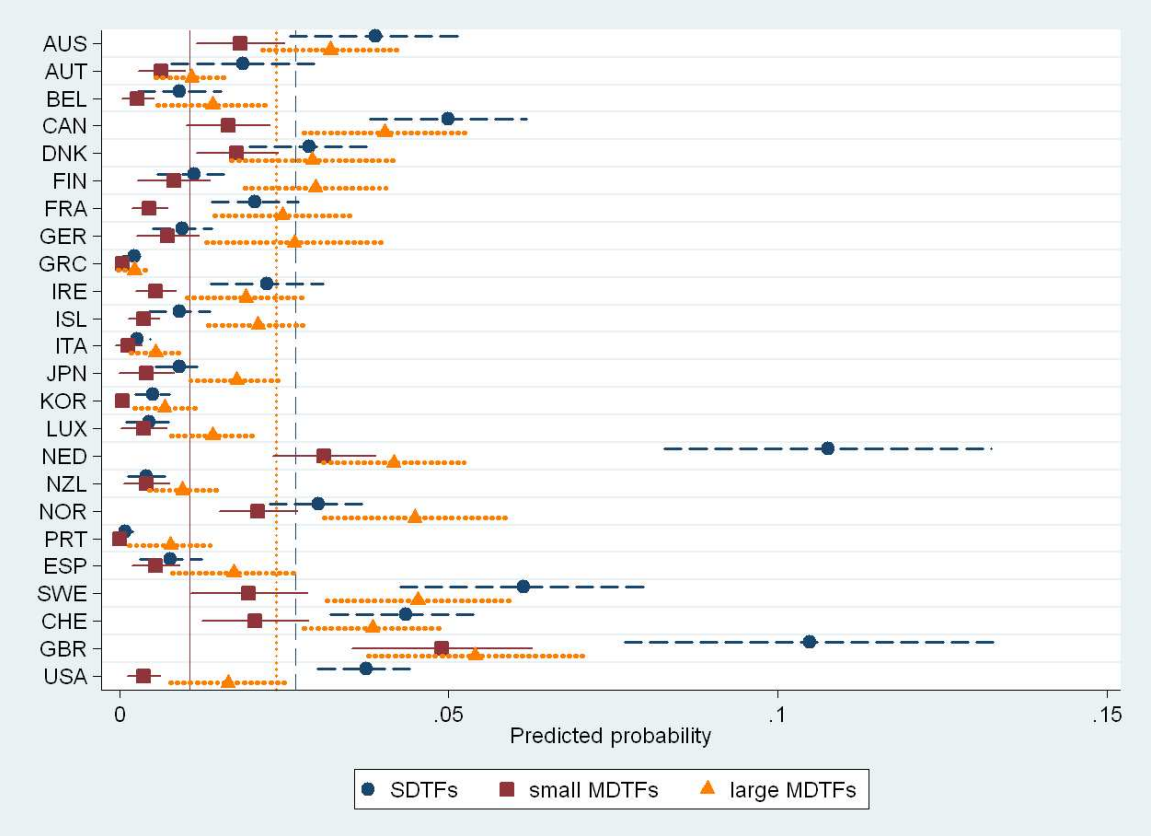
Notes: Blue bars show the total number of contributions to any trust fund by any donor that benefited the respective recipient over the period from FY 2002-13.

Figure 2: Propensity to participate in any fund across DAC donors



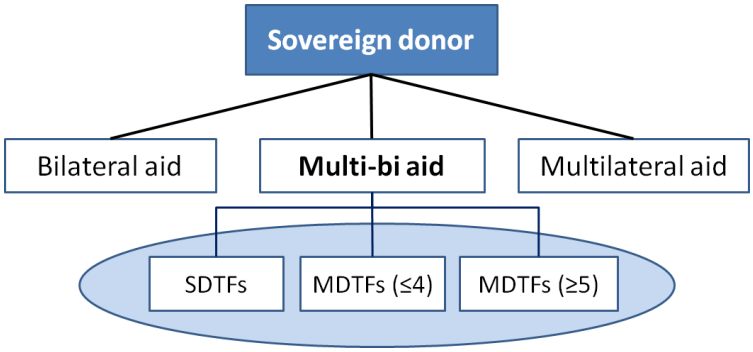
Notes: The red line denotes the unweighted average participation rate across all DAC donors.
Source: World Bank 2014b

Figure 3: Participation in different types of funds across DAC-24



Sources: World Bank (2014a) and World Bank (2014b)

Figure 4: Individual donor decision among general aid types



Tables

Table 1: Main regressions using Choice set A

	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5
Ex-ante variation of sector focus	-0.005	-0.0003	-0.159***	-0.003	-0.011	-0.159***	-0.004	-0.002	-0.171***
	(0.005)	(0.017)	(0.042)	(0.006)	(0.017)	(0.040)	(0.007)	(0.020)	(0.043)
Number of G8 summit pledges	-0.002	0.011**	0.0002	-0.002	0.005	0.024**	-0.003	0.003	0.017
	(0.002)	(0.005)	(0.010)	(0.002)	(0.006)	(0.012)	(0.003)	(0.007)	(0.013)
Global activity	-0.005*	0.014	0.105***	-0.005*	0.019**	0.112***	-0.008**	0.023**	0.125***
	(0.003)	(0.009)	(0.018)	(0.003)	(0.009)	(0.017)	(0.004)	(0.010)	(0.019)
Fragile state assistance	-0.007**	-0.006	0.055***	-0.008**	-0.005	0.072***	-0.009**	0.002	0.068***
	(0.004)	(0.010)	(0.019)	(0.003)	(0.010)	(0.019)	(0.004)	(0.011)	(0.022)
Middle-income country assistance	-0.001	-0.005	-0.088***	-0.001	-0.004	-0.087***	0.001	-0.008	-0.090***
	(0.003)	(0.010)	(0.019)	(0.003)	(0.010)	(0.019)	(0.003)	(0.011)	(0.021)
Unemployment rate	-0.005***	-0.010***	-0.016***	0.005	0.045**	-0.017	0.009	0.040**	-0.013
	(0.000)	(0.001)	(0.003)	(0.005)	(0.019)	(0.033)	(0.007)	(0.021)	(0.048)
Logarithm of GDP							-0.005	0.045	0.219
							(0.046)	(0.180)	(0.317)
Logarithm of bilateral aid							-0.015	-0.104	0.134
							(0.025)	(0.081)	(0.147)
Multilateral aid (% of total aid)							-0.038	0.382	-0.700
							(0.185)	(0.549)	(1.227)
Administrative costs (% of bilateral aid)							-0.011	-0.035*	0.061
							(0.007)	(0.019)	(0.068)
Researcher density							-0.006**	0.023**	-0.027
							(0.003)	(0.010)	(0.019)
Logarithm of R&D expenditure							0.091***	-0.115	0.248*
							(0.020)	(0.070)	(0.132)
Government quality							-0.042	-0.198	-0.340
							(0.055)	(0.220)	(0.366)
DAC (co)chair							-0.005	-0.005	0.068**
							(0.005)	(0.016)	(0.032)
Contentious issue							0.003	0.019	-0.001
							(0.004)	(0.014)	(0.026)
Donor fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Year fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Observations	23075	5007	3101	23075	5007	3101	18195	4067	2624
Adjusted R^2	0.01	0.01	0.03	0.09	0.18	0.45	0.10	0.19	0.46
Percent correctly predicted positives	77.4	73.1	65.3	83.3	80.6	79.9	87.5	85.3	81.3
Percent correctly predicted negatives	40.7	42.3	51.4	59.8	62.6	60.0	43.7	48.5	51.1
Cutoff	0.034	0.083	0.324	0.034	0.083	0.324	0.034	0.083	0.324

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table 2: Main regressions using Choice set B

	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5
Ex-ante variation of sector focus	-0.004	0.004	-0.028***	-0.004	0.002	-0.023***	-0.005	0.002	-0.024***
	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)	(0.005)	(0.005)	(0.004)	(0.006)
Number of G8 summit pledges	-0.003**	0.004***	0.007***	-0.002	0.003**	0.007***	-0.003	0.002	0.008***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)
Global activity	-0.010***	0.007***	0.058***	-0.009***	0.006***	0.059***	-0.011***	0.006***	0.065***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Fragile state assistance	-0.009***	0.005***	0.023***	-0.008***	0.004**	0.023***	-0.009***	0.007***	0.022***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
Middle-income country assistance	-0.002	0.0002	0.005**	-0.002	0.001	0.005*	-0.001	0.002	0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)
Unemployment rate	-0.003***	-0.002***	-0.002***	0.003	0.007**	-0.001	0.006	0.009**	-0.003
	(0.000)	(0.000)	(0.000)	(0.004)	(0.003)	(0.004)	(0.005)	(0.004)	(0.006)
Logarithm of GDP							-0.007	0.019	0.006
							(0.035)	(0.026)	(0.040)
Logarithm of bilateral aid							-0.012	-0.014	0.031
							(0.018)	(0.014)	(0.021)
Multilateral aid (% of total aid)							-0.039	0.129	-0.081
							(0.134)	(0.100)	(0.151)
Administrative costs (% of bilateral aid)							-0.009*	-0.007*	0.010*
							(0.005)	(0.004)	(0.005)
Researcher density							-0.006***	0.005***	-0.001
							(0.002)	(0.002)	(0.002)
Logarithm of R&D expenditure							0.081***	-0.036***	0.021
							(0.015)	(0.011)	(0.017)
Government quality							-0.023	-0.041	-0.005
							(0.042)	(0.031)	(0.048)
DAC (co)chair							-0.004	-0.004	0.003
							(0.004)	(0.003)	(0.004)
Contentious issue							0.005*	-0.002	-0.005
							(0.003)	(0.002)	(0.003)
Donor fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Year fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Observations	31183	31183	31183	31183	31183	31183	24886	24886	24886
Adjusted R^2	0.01	0.00	0.03	0.07	0.03	0.07	0.08	0.03	0.07
Percent correctly predicted positives	81.7	74.2	51.0	83.5	87.5	71.9	87.9	90.4	77.5
Percent correctly predicted negatives	39.6	39.0	55.2	60.3	50.0	48.0	45.0	38.6	36.9
Cutoff	0.025	0.013	0.031	0.025	0.013	0.031	0.025	0.013	0.031

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table 3: Wald tests corresponding to Table 1

(1) (2)		SDTF MDTF≤ 4	SDTF MDTF≥5	MDTF≤4 MDTF≥5	SDTF MDTF≤ 4	SDTF MDTF≥5	MDTF≤4 MDTF≥5	SDTF MDTF≤ 4	SDTF MDTF≥5	MDTF≤4 MDTF≥5
Ex-ante variation of sector focus	+	-0.005	0.154***	0.159***	0.008	0.155***	0.148***	-0.002	0.167***	0.169***
Number of G8 summit pledges	-	-0.013***	-0.003	0.011	-0.007	-0.026***	-0.019*	-0.006	-0.020**	-0.014
Global activity	-	-0.019**	-0.110***	-0.091***	-0.024**	-0.117***	-0.093***	-0.030***	-0.132***	-0.102***
Fragile state assistance	-	-0.001	-0.063***	-0.061***	-0.003	-0.080***	-0.077***	-0.011	-0.076***	-0.066***
Middle-income country assistance	+	0.044	0.087***	0.083***	0.027	0.086***	0.084***	0.009	0.091***	0.082***
Unemployment rate	+	0.005**	0.011	0.006	-0.040	0.021	0.061**	-0.031	0.221	0.053*

Note: For each variable shown in the first column, cell entries show the difference in coefficients across equations indicated by the column headers ($\beta_{(1)} - \beta_{(2)}$ for any coefficient β), along with the significance of a one-sided t-test (expected direction of effect shown to the right of each variable).

Table 4: Wald tests corresponding to Table 2

(1) (2)		SDTF MDTF≤ 4	SDTF MDTF≥5	MDTF≤4 MDTF≥5	SDTF MDTF≤ 4	SDTF MDTF≥5	MDTF≤4 MDTF≥5	SDTF MDTF≤ 4	SDTF MDTF≥5	MDTF≤4 MDTF≥5
Ex-ante variation of sector focus	+	-0.009	0.023***	0.032***	-0.006	0.019***	0.025***	-0.008	0.018***	0.026***
Number of G8 summit pledges	-	-0.007***	-0.010***	-0.003**	-0.005***	-0.010***	-0.005**	-0.005***	-0.011***	-0.006**
Global activity	-	-0.016***	-0.067***	-0.051***	-0.015***	-0.068***	-0.053***	-0.017***	-0.076***	-0.060***
Fragile state assistance	-	-0.014**	-0.032***	-0.018***	-0.013**	-0.032***	-0.019***	-0.017***	-0.031***	-0.015***
Middle-income country assistance	+	-0.002	-0.007	-0.005	-0.003	-0.006	-0.004	-0.003	-0.003	-0.001
Unemployment rate	+	-0.002	-0.002	-0.0003	-0.003	0.005	0.008	-0.002	0.009*	0.011

Note: For each variable shown in the first column, cell entries show the difference in coefficients across equations indicated by the column headers ($\beta_{(1)} - \beta_{(2)}$ for any coefficient β), along with the significance of a one-sided t-test (expected direction of effect shown to the right of each variable).

Appendix

This Appendix provides the formal model and additional tables corresponding to the paper "Which donors, which funds? The choice of multilateral funds by bilateral donors at the World Bank."

A simple model

Consider a donor i, who faces three stylized options to channel its multi-bi aid budget through trust funds: single-donor trust funds (SDTFs), small-n multi-donor trust funds (MDTF$\leq$4), and large-n multi-donor trust funds (MDTF$\geq$5). We formalize the choice among these three options in a simple model to clarify and illustrate the donor's trade-offs. We assume that the utility U_i^f of donor i to participate in trust fund f increases with efficiency of resource use and with the extent to which development outcomes associated with trust funds are attributed to the donor government by its national constituency. Cooperation with other donors is expected to bring about a number of advantages in this respect. Following Milner and Tingley (2013), we refer to them as advantages of "burden-sharing." In practice, these may include efficiency gains through synergies, risk sharing opportunities, or the possibility to contribute to important results with little resources. Hence for each donor, U_i^f should positively depend on α, the number of other donors participating in the fund.

At the same time, we consider that large divergences of preferences between donors reduce the utility of individual participation. Preference heterogeneity implies that donors do not really share the same objectives, leading to reduced efficiency from the perspective of each individual donor. Transactions cost associated with finding a consensus, and the lack of congruence between that consensus and each donor's own objectives, will be greater. Hence, U_i^f positively depends on preference homogeneity (γ).

Note that for SDTFs, preferences are homogenous by definition (highest possible value of γ). The more donors there are, the less homogeneous their preferences will be, other things equal. Hence, γ negatively depends on α, and $\gamma(\alpha = 0) = \gamma^{\max}$. Since the direct effect of α on U_i^f is positive, while its indirect effect (through γ) is negative, the optimal trust fund may be of intermediate size. Whether this is the case or whether the optimum is at the extremes (if the fund is attractive only for a single donor or, conversely, for a very high number of donors) depends on the "weight" given to burden-sharing relative to preference homogeneity $c(x_i^f)$, where x_i^f reflects the specific characteristics of the fund (e.g., area of activity and country or region covered implying different risk sharing opportunities), and of the individual donor (e.g., donor seeking global leadership role versus small donor using the multilateral organization primarily to compensate the lack of own administrative capacities). As it appears implausible that for a given combination of fund and donor characteristics, the utility peaks at different levels of α, we assume that $U_i^f(\alpha)$ is unimodal.

Finally, we assume that the donor does not benefit from funds that are financed only by other donors, as their development outcomes will be attributed only to members of those funds. This assumption is broadly in line with the donors' strong concern for visibility that is one of the most important general drivers of multi-bi aid according to a survey carried out by the OECD/DAC Secretariat.[107]

Let trust fund membership be denoted by an indicator variable M_i^f, with $M_i^f = 1$ if donor i is a member of trust fund f, and $M_i^f = 0$ otherwise. The utility of donor i from trust fund f is then given by:

$$U_i^f = \begin{cases} U_i^f(\alpha^f, \gamma(\alpha^f), c(x_i^f)) & \text{if} \quad M_i^f = 1, \\ 0 & \text{if} \quad M_i^f = 0. \end{cases} \tag{1}$$

[107] See Tortora and Steensen (2014). We acknowledge that this assumption is an oversimplification, as the typical donor in reality is likely to be somewhat altruistic and obtain some utility from favorable development outcomes produced without its involvement.

Donor i decides about membership in any given fund by considering the utility this fund will provide to it, subject to a budget constraint that limits its multi-bi contributions to $\bar{M}_i$ (i.e., the overall aid budget net of the resources required for bilateral and multilateral commitments). For simplicity, we assume that donor i contributes an equal amount (say, 1 unit) to each trust fund in which it participates. Then, $\bar{M}_i$ also reflects the maximum number of trust funds the donor can participate in.

Let F be the overall number of possible trust funds a donor might create or join.[108] The optimization problem then becomes:

$$\max_{M_1,\ldots,M_F} \sum_{f=1}^{F} U_i^f \quad \text{s.t.} \quad \sum_{f=1}^{F} M_i^f \leq \bar{M}_i \tag{2}$$

The obvious solution is that the $\bar{M}_i$ trust funds providing the greatest utility will be funded. We denote the utility of the marginal fund the donor will become a member of (i.e., the $\bar{M}_i$-best fund) as $\bar{U}_i$. We abstract from the case that two or more funds would have exactly the same utility. Then the optimal participation decision for each individual fund is given by:

$$M_i^f = \begin{cases} 1 & \text{if} \quad U_i^f \geq \bar{U}_i, \\ 0 & \text{if} \quad U_i^f < \bar{U}_i. \end{cases} \tag{3}$$

For illustrative purposes, let us assume for the moment that $\bar{U}_i$ is fixed. This allows us to graphically demonstrate the implications of our model. Figure 5 shows $U_i^f(\alpha)$ for three different constellations $c(x_i^f)$. Simplifying notation by suppressing the sub- and superscripts i and f, we can focus on these three constellations, say A, B, and C. The function $U_A(\alpha)$ (solid line) shows potential trust fund options

[108] For purposes of this illustrative model, we take other donors' participation decisions as given.

that vary only in the number of participating donors α, and are otherwise fully identical (all corresponding to fund and donor characteristics in constellation A). In the illustration, $\bar{U}$ is fixed at 2.5 (dotted line). In this setting, under constellation A, neither a SDTF nor a large MDTF would be attractive, but the utility of membership would be above the threshold for a number of other donors between one and four.

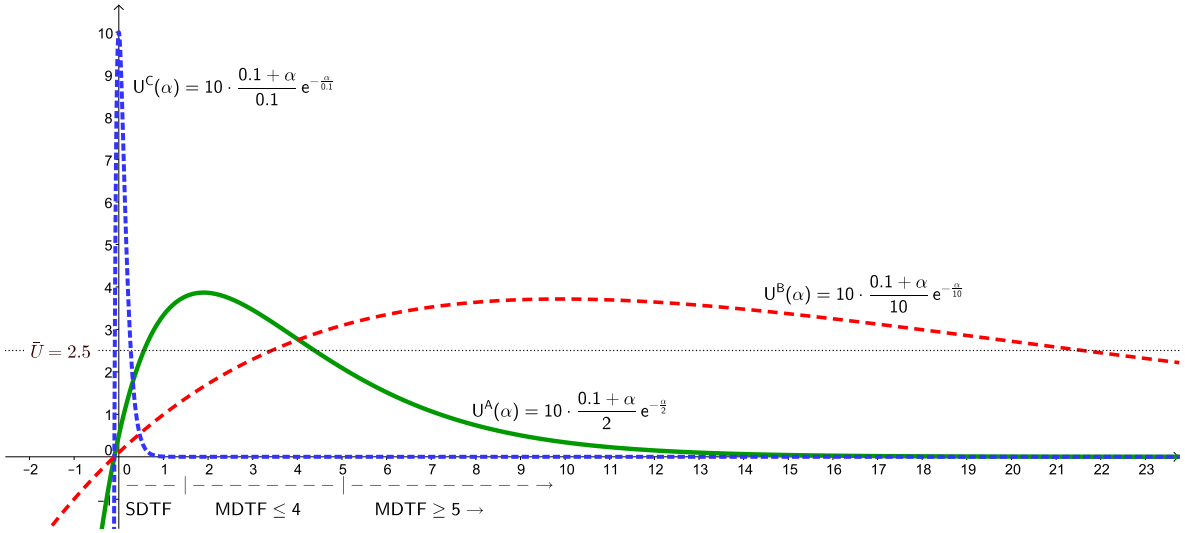
Now imagine that the context changes, for instance because the funds are proposed to support development in very risky environments, such as post-conflict states. In such a situation, the potential for risk sharing among donors dominates the negative impact of additional donors on preference homogeneity, for any plausible number of donors.[109] This is reflected in a different $c(x)$, represented by constellation B and the respective utility function $U_B(\alpha)$ in Figure 5 (dashed line, large dashes). $U_B(\alpha)$ is at or above the threshold value of $\bar{U}_i$=2.5 for at least four other donors.

Finally, in constellation C, the situation is such that even with just one other donor, preference heterogeneity is sufficiently extreme (and the benefits of burden-sharing sufficiently minor) that membership is unattractive. Only in the case of a SDTF is utility $U_C(\alpha)$ (small dashes) sufficiently high to make the fund attractive for membership. In a case such as this one there may be important geopolitical or trade interests at stake for the donor, with the trust fund channel used to avoid administrative costs or to take advantage of expertise the donor agency does not possess.

It becomes clear that the decision to enter any individual trust fund depends on the number of other donors, the specific characteristics of the fund and the donor ($c(x)$ summarized here in constellations A, B, and C), and the complex interaction of the two that work through the direct effect of α on burden- sharing versus the

[109] Note that the OECD/DAC membership counted 22 members – including all traditional donor countries (and a few others) – during most of our period of analysis. Hence, trust funds of about size 20 are the largest possible funds one should imagine here.

Figure 5: Comparing the utility of differently sized trust funds for different constellations (A, B, C)



Notes: The concrete utility function used for this figure is $U(\alpha, \gamma(\alpha), c(x)) = f(\alpha, c) \cdot \gamma(\alpha, c)$, whereby $f(\alpha, c) = 10 \cdot \frac{0.1+\alpha}{c}$, and $\gamma(\alpha, c) = e^{-\frac{\alpha}{c}}$. This is in line with the required properties formulated above, $f'(\alpha) > 0$, $U'(\gamma) > 0$, $\gamma'(\alpha) < 0$, and $U(\cdot)$ is unimodal. Moreover, for the parameter of preference homogeneity we have $\gamma(\alpha = 0) = \gamma^{\max} = 1$ (for SDTFs), and $\lim_{\alpha \to \infty} \gamma(\alpha) = 0$.
$c(x)$ enters as a factor that increases preference homogeneity γ for any given number of donors. More generally, it scales down the effect of α in a way that for high α the reduction in preference homogeneity is mitigated, which reflects a stronger emphasis on burden-sharing. The three constellations are presented using $c = 2$ (constellation A), $c = 10$ (constellation B, strong role of burden-sharing), and $c = 0.1$ (constellation C, emphasis on the loss of preference homogeneity).
As α is discrete rather than continuous, the solidly drawn lines are not exactly correct, but allow us to better distinguish the shape of $U(\alpha)$ across the three constellations.

indirect effect of α via preference homogeneity. For each of the three trust fund categories (i.e., SDTF, small MDTF, large MDTF), we can assess the effect of the different constellations (different $c(x)$), allowing us to discuss the model implications without any predefined $\bar{U}$. Indeed, since $\bar{U}$ is defined as the utility of the $\bar{M}$-best trust fund, it itself depends on $c(x)$.

Let us stick to the functional form of $U(\cdot)$ chosen for Figure 5. We further assume that the choice set consists of three trust funds, each of them reflecting one of the constellations A, B, or C. Now within each of the constellations, the trust fund proposed could be either a SDTF, a small MDTF, or a large MDTF. Assume $\bar{M}$=2, i.e., two out of three trust funds can be funded. We can go through the 3^3

possible combinations (three constellations combined with three trust fund types) and determine what the choice would be in each case. We will cover three arbitrary examples below; the full set of combinations is presented in Table 5.

First, we consider the case that for all three constellations, only SDTFs are available (Case 1 in Table 5). Among these, the donor chooses the trust funds with characteristics C and A. The marginal trust fund is trust fund A with $\bar{U} = U^A$.

As a second example, we consider a case in which for constellation A and B, the available options are small MDTFs, while a SDTF is available for C. In this case the two best options are the funds A and C, and A is again the marginal fund (Case 13 of Table 5).

In the third example, we again keep the option of a SDTF for C, but propose large MDTFs for the constellations A and B. Again fund C achieves the highest level of utility, but this time, it is followed by fund B, which therefore becomes the marginal fund, so that $\bar{U} = U^B$ (Case 21 of Table 5).

As these examples demonstrate, specific characteristics of donors and trust funds $c(x)$ have a different impact on the membership decision depending on whether a SDTF, a small MDTF, or a large MDTF are the possible options.

Table 5: A simple example to illustrate the model

Case	A	B	C	Funding choice	Marginal fund
1	SDTF	SDTF	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^A$
2	SDTF	SDTF	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
3	SDTF	SDTF	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
4	MDTF≤ 4	SDTF	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^A$
5	MDTF≤ 4	SDTF	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
6	MDTF≤ 4	SDTF	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
7	MDTF≥ 5	SDTF	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^C$ *
8	MDTF≥ 5	SDTF	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$ *
9	MDTF≥ 5	SDTF	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$ *
10	SDTF	MDTF≤ 4	SDTF	M^A=0, M^B=1, M^C=1	$\bar{U} = U^B$
11	SDTF	MDTF≤ 4	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
12	SDTF	MDTF≤ 4	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
13	MDTF≤ 4	MDTF≤ 4	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^A$
14	MDTF≤ 4	MDTF≤ 4	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
15	MDTF≤ 4	MDTF≤ 4	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
16	MDTF≥ 5	MDTF≤ 4	SDTF	M^A=., M^B=., M^C=1	$\bar{U} = .$ **
17	MDTF≥ 5	MDTF≤ 4	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
18	MDTF≥ 5	MDTF≤ 4	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
19	SDTF	MDTF≥ 5	SDTF	M^A=0, M^B=1, M^C=1	$\bar{U} = U^B$
20	SDTF	MDTF≥ 5	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
21	SDTF	MDTF≥ 5	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
22	MDTF≤ 4	MDTF≥ 5	SDTF	M^A=., M^B=., M^C=1	$\bar{U} = .$ **
23	MDTF≤ 4	MDTF≥ 5	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
24	MDTF≤ 4	MDTF≥ 5	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
25	MDTF≥ 5	MDTF≥ 5	SDTF	M^A=0, M^B=1, M^C=1	$\bar{U} = U^B$
26	MDTF≥ 5	MDTF≥ 5	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
27	MDTF≥ 5	MDTF≥ 5	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$

Notes: Donor choices under all possible constellations and all possible types of trust funds available to each donor for an example of 3 donors, 3 funds, and 3 constellations. M^X refers to the funding choice with respect to the proposed fund X, whereas $\bar{U}$ gives the utility of the $\bar{M}$-best fund, or, the marginal fund still being funded.

* (unless MDTF≥ 5 is very large)

** (depends on exact α)

Table 6: Robustness tests with different thresholds using Choice set A

	SDTF	MDTF≤ 6	MDTF≥7	MDTF≤ 10	MDTF≥11
Ex-ante variation of sector focus	-0.003	0.002	-0.016	-0.050***	-0.431***
	(0.006)	(0.017)	(0.057)	(0.017)	(0.109)
Number of G8 summit pledges	-0.002	0.007	0.030**	-0.001	0.058**
	(0.002)	(0.006)	(0.014)	(0.006)	(0.023)
Global activity	-0.005*	0.015*	0.126***	0.037***	0.203***
	(0.003)	(0.008)	(0.024)	(0.008)	(0.050)
Fragile states assistance	-0.008**	-0.003	0.067***	0.006	0.126***
	(0.003)	(0.010)	(0.025)	(0.010)	(0.042)
Middle-income country assistance	-0.001	-0.003	-0.123***	-0.007	-0.140***
	(0.003)	(0.009)	(0.024)	(0.009)	(0.041)
Unemployment rate	0.005	0.027*	-0.010	0.022	0.035
	(0.005)	(0.016)	(0.063)	(0.017)	(0.068)
Donor fixed effects	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes
Observations	23075	6041	2067	7074	1034
Adjusted R^2	0.06	0.11	0.22	0.11	0.29
Percent correctly predicted positives	83.3	77.7	76.7	77.7	78.0
Percent correctly predicted negatives	59.8	63.6	63.7	62.9	68.7
Cutoff	0.034	0.097	0.401	0.125	0.515

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table 7: Robustness tests with different thresholds using Choice set B

	SDTF	MDTF≤ 6	MDTF≥7	MDTF≤ 10	MDTF≥11
Ex-ante variation of sector focus	-0.004	0.002	-0.030***	0.002	-0.012***
	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Number of G8 summit pledges	-0.002	0.003**	0.006***	0.003**	0.007***
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)
Global activity	-0.009***	0.006***	0.056***	0.006***	0.043***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Fragile states assistance	-0.008***	0.004**	0.022***	0.004**	0.014***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)
Middle-income country assistance	-0.002	0.001	0.004*	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Unemployment rate	0.003	0.007**	-0.001	0.007**	-0.002
	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Donor fixed effects	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes
Observations	31183	31183	31183	31183	31183
Adjusted R^2	0.05	0.02	0.04	0.02	0.03
Percent correctly predicted positives	83.5	87.5	87.5	87.5	95.4
Percent correctly predicted negatives	60.3	49.9	55.1	49.9	49.6
Cutoff	0.025	0.013	0.031	0.013	0.017

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table 8: Full-sample descriptive statistics

	count	mean	sd	min	max
1 if ccode is donor to TF	52416	0.06	0.24	0.00	1.00
1 if ccode is donor to SDTF	52416	0.03	0.16	0.00	1.00
1 if ccode is donor to MDTF$\leq$ 4	52416	0.01	0.10	0.00	1.00
1 if ccode is donor to MDTF$>$ 5	52416	0.02	0.15	0.00	1.00
Ex-ante variation of sector focus	49080	0.84	0.26	0.42	2.67
G8 summit pledges	49800	0.40	0.68	0.00	5.00
Global activity	52416	0.37	0.48	0.00	1.00
Fragile state assistance	49800	0.11	0.31	0.00	1.00
Middle-income country assistance	49800	0.18	0.38	0.00	1.00
Donor unemployment rate	50188	7.04	2.98	1.54	20.50
Log(GDP)	43406	26.92	1.56	22.58	30.24
Log(bilateral aid)	52367	21.37	1.59	16.81	24.20
Multilateral aid share	52367	0.31	0.13	0.07	0.85
Administrative cost share	52349	6.02	1.75	0.00	13.61
Researcher density	46482	7.52	2.89	1.35	17.25
Log(R&D expenditure)	46806	22.82	1.67	17.70	26.65
ICRG Index	47255	0.86	0.12	0.47	1.00
(Co-)chair at DAC	52416	0.07	0.26	0.00	1.00
Contested issue	49800	0.10	0.30	0.00	1.00

Table 9: Detailed information on all variables

Variable name	Further explanations and base sources
Dependent variable	
Participation decision	1 whether the donor *ccode* indeed was a donor to trust fund with identifier *trustee* over FY02-FY13 (World Bank 2014b)
Categorical variables	
Single-donor trust fund (SDTF)	Exactly one participating donor (sovereign donor with a positive vote share in the Board); this is a behavioral definition, not a legal definition, as a single donor could set up a trust fund using the legal instrument of a MDTF; the discrepancy is empirically irrelevant; as above, any contribution over FY02 and FY13 will be considered (World Bank 2014b)
Small multi-donor trust fund (MDTF≤4)	More than one sovereign donor participating in the fund, but at most four donors; participation requires at least one positive contribution over FY02-FY13 (World Bank 2014b)
Large multi-donor trust fund (MDTF≥5)	More than four sovereign donors participating in the fund (World Bank 2014b)
Main predictors	
Ex-ante variation of sector focus	Coefficient of variation in donor preferences in the sectors underlying the trust fund over the three years before its establishment; donor preferences are given by sector shares in bilateral aid, using data from OECD/DAC Creditor Reporting System (2014b). Formally, the measure computes as follows: For S sectors of a TF, obtain the relative shares s_i (i=1, ..., n). Compute the standard deviation σ_s of the series $\{s_i\}$ and divide by its mean μ. Take the

	simple average over all S sectors to obtain the heterogeneity measure.
Number of sectors with G8 summit pledges	Number of sectors of the trust fund in which the international community made a pledge at the G8 summit in the year before activation of the TF (hand-coding available upon request)
Global activity	Trust fund supports global activities; variable *countrygrouping* in the original data set; non-global activities are country-specific activities and regional activities (World Bank 2014a)
Fragile state assistance	Trust fund supports fragile state; variable *fragileflag* in the original data set (World Bank 2014a)
Middle-income country assistance	A trust fund is considered to support middle-income countries if its designated set of potential recipients is IBRD countries (which are not eligible for IDA funding) (World Bank 2014a)
Unemployment rate	Donor unemployment rate (%) in the three years before activation of the trust fund (OECD 2014a)
Control variables	
Logarithm of GDP	Gross Domestic Product (GDP), logarithm of constant billion USD value, PPP and output approach, in the three-year period prior to TF creation (OECD 2014a)
Logarithm of bilateral aid	Bilateral aid in the three-year period prior to TF creation (using constant million USD values reported in DAC1) (OECD 2014b)
Multilateral aid (% of total aid)	Multilateral aid in % of total ODA in the three-year period prior to TF creation OECD 2014b, DAC1 table)
Administrative costs (% of bilateral aid)	Administrative costs share in % of bilateral aid in the three-year period prior to TF creation (OECD 2014b,

	DAC1 table)
Researcher density	Researcher density: Number of researchers per 100 full-time employees, in the three years prior to TF creation (OECD 2014a)
Logarithm of R&D expenditure	Gross domestic R&D expenditure (both private and public), logarithm of constant USD value, in the three-year period prior to TF creation (OECD 2014a)
Government quality	ICRG index on bureaucratic quality of donor country (Teorell et al. 2013)
DAC (co)chair	Whether donor held a (co)chair in the relevant OECD/DAC working group in the three years before establishment of the trust fund; relevant working groups are related to the sector underlying the trust fund (e.g., chairmanship in the Peace and Governance Working Group was only coded for trust fund assisting fragile states) (hand-coding available on request)
Contentious issue	At least one match in the titles of any of the projects under the fund search string: “hydropower”, “rain forest” and “Brazil”, “privatization” and “school” (or “education”), “North Korea”, or “Cuba”; At least one match with the list of underlying World Bank sectors and themes deemed to be contentious (i.e., hydropower, privatization, anti-terrorism and money laundering); expert survey item was considered contentious if it was judged relative more contentious than not (World Bank 2013b)

Online Appendix

Which donors, which funds? The choice of multilateral funds by bilateral donors at the World Bank

In this Online Appendix, we present another robustness check in which we rerun our analysis considering the power distribution among the potential members of a trust fund. One might argue that the incentive of a given donor to join a trust fund depends on the already participating donors and the nature of their contribution.[1] For example, if the existing donors have paid in a very high contribution, a potential donor might consider that it only will have a small share in overall contributions if it joins. This certainly reduces its ability to assert its own preference further. In contrast, high existing contributions imply a greater existing effort in terms of the attainable development results. This might encourage even a small donor to join a fund that is already controlled by a powerful donor.

We perform two types of tests. The first is to replace the number of donors (which stratifies our sample) by the effective number of donors, defined as the inverse of the summed squares of contribution shares. If every donor pays an equal share into the trust fund, both numbers are equal. In contrast, if there is a "lead donor," the effective number of donors may be a lot smaller than the number of donors. As the whole distribution of trust fund sizes shifts to the left when using effective numbers, we define the new cutpoints to be the same as before in accordance with the empirical distribution. In other words, while four donors are the 90^{th} percentile in the original sample, our new 90^{th} percentile using effective numbers is 2.5. Table 1 below summarizes the results for fixed-effect estimations. The left-hand half of the table uses sample A, the right-hand half uses sample B. In essence, the results are qualitatively similar to the ones in our main analysis. Some of our estimates are

[1] We thank an anonymous reviewer for pointing out this possibility.

even more significant. In particular, ex-ante sector variation in donor preferences leads to less engagement in large funds relative to small funds. Conversely, a donor chooses large funds over small funds significantly more often in the case of prior G8 pledges, global activities, and assistance to fragile states. Support for the hypothesis on MICs rests on the choice of sample, though the preferred choice for MICs tends to be a medium-sized fund. Last, the result on unemployment differs from our previous one.

As a second test, we use the constellation of power in a fund as an additional control variable in our original analysis. More specifically, we include the effective number of donors and divide by the actual number of participating donors. The variable takes values close to one for relatively equal forms of "minilateralism," and values closer to 1/N for unequal ones. Note that this approach is not without problems. Clearly, the contribution amount is endogenous with respect to the decision to participate in a given fund. The results thus need to be taken with caution.

As shown in Table 2, we find that a given donor is more likely to participate in larger funds if the power distribution is more unequal. The existence of a "lead donor" hence may facilitate multilateral cooperation. A case in point is the Afghanistan Reconstruction Trust Fund (ARTF). The United States is an important donor, and its leadership most likely made other donors join. What is important though is that our key results continue to hold. A higher ex-ante variation in sector focus among the donors reduces the individual likelihood to choose a large-n fund, while global activities and fragile states are issue areas that promote cooperation in large-n funds. A donor also is less likely to opt for a large-n funds in the case of assistance to MICs. While all these findings confirm our previous analysis, the result on G8 pledges is somewhat different and less significant.

In sum, the results suggest that it is equally plausible to argue that a donor considers the effective number of donors (i.e., the power distribution among the fund's donors in terms of financial plight). In this sense, the effective number accu-

rately reflects for any donor the potential to assert its own preferences. The small differences in the results compared to our previous analysis, however, suggest that financial power is not as relevant as one might expect in trust funds. Hence, compared to assessed contributions (i.e., IDA funding), the contribution amount is not a primary determinant of policy influence in a trust fund. The reason is that there are hundreds of trust funds that any donor may participate in, and hence there is a resource constraint when it comes to attending meetings, providing policy input, and monitoring programs, which most likely establishes a ceiling to the degree of influence that any one donor is able to exert.

Table 1: Robustness tests with effective number of donors

	SDTF	Small MDTF	Large MDTF	SDTF	Small MDTF	Large MDTF
Ex-ante variation of sector focus	-0.003	-0.030	-0.116***	-0.004	0.000	-0.021***
	(0.006)	(0.021)	(0.032)	(0.004)	(0.003)	(0.005)
Number of G8 summit pledges	-0.002	0.011	0.034***	-0.002	0.003***	0.007***
	(0.002)	(0.008)	(0.011)	(0.002)	(0.001)	(0.002)
Global activity	-0.005*	0.009	0.122***	-0.009***	0.004***	0.060***
	(0.003)	(0.011)	(0.015)	(0.002)	(0.001)	(0.002)
Fragile states assistance	-0.008**	0.001	0.076***	-0.009***	0.008***	0.020***
	(0.003)	(0.012)	(0.017)	(0.002)	(0.002)	(0.003)
Middle-income country assistance	-0.001	0.004	-0.029*	-0.002	0.004***	0.001
	(0.003)	(0.011)	(0.018)	(0.002)	(0.001)	(0.003)
Unemployment rate	0.005	0.065***	-0.018	0.003	0.006**	-0.001
	(0.005)	(0.022)	(0.030)	(0.004)	(0.003)	(0.005)
Donor fixed effects	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes
Observations	23006	3674	3768	31183	31183	31183
Adjusted R^2	0.09	0.19	0.43	0.05	0.02	0.04

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Left half of column set uses sample A; right half uses sample B

Table 2: Robustness tests with effective number of donors

	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5
Power asymmetry	0.000	-0.029	-0.118**	0.062***	-0.071***	-0.394***
	(.)	(0.026)	(0.047)	(0.005)	(0.004)	(0.005)
Ex-ante variation of sector focus	-0.003	-0.015	-0.138***	-0.005	0.003	-0.027***
	(0.006)	(0.019)	(0.041)	(0.004)	(0.003)	(0.004)
Number of G8 pledges	-0.002	0.005	0.019	-0.001	0.001	-0.005***
	(0.002)	(0.008)	(0.012)	(0.002)	(0.001)	(0.002)
Global activity	-0.005*	0.012	0.104***	-0.004*	-0.001	0.019***
	(0.003)	(0.010)	(0.018)	(0.002)	(0.002)	(0.002)
Fragile state assistance	-0.008**	-0.008	0.060***	-0.006**	0.001	0.005**
	(0.003)	(0.011)	(0.019)	(0.002)	(0.002)	(0.002)
Middle-income country assistance	-0.001	-0.002	-0.080***	-0.000	-0.001	-0.005**
	(0.003)	(0.011)	(0.019)	(0.002)	(0.002)	(0.002)
Unemployment rate	0.005	0.053**	-0.014	0.003	0.007**	-0.001
	(0.005)	(0.021)	(0.033)	(0.004)	(0.003)	(0.004)
Donor fixed effects	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes
Observations	23075	4341	3032	30448	30448	30448
Adjusted R^2	0.09	0.21	0.46	0.05	0.03	0.19

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Left half of column set uses sample A; right half uses sample B